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Asimov's

SCIENCE FICTION

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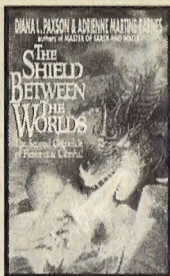
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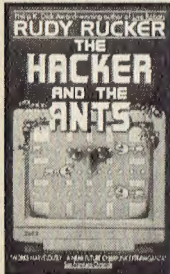




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GOLD DOESN'T SMELL

The cities of our nation have been overrun by hordes of street people—and street people, by definition, live in the streets, which usually means that they tend to excrete in the streets as well. This development has caused an obvious and disagreeable problem for the housebroken portion of the population, leading to the obvious solution: a system of readily available mechanized public toilets.

Such devices are already in operation in many European cities, and not just for street people. They are attractive, even elegant, items, as this inveterate tourist will testify.

I conducted my own field research on the subject a couple of years ago in Paris upon experiencing a moment of metabolic crisis along the fashionable Avenue de l'Opera. There were no cafés in sight, only dignified shops where I would feel abashed to seek succor; but then, to my immense delight and relief, I found myself in front of a sleek tubular structure that had something of the appearance of the nose cone of a space vehicle, just before me on the spacious sidewalk. My command of French,

though uncertain at times, was easily equal to the task of decoding the instructions. I dropped a coin in the slot, a franc or two, and a sliding door silently unfurled before me, and I entered a small, clean, brightly lit chamber, a glorious little temple of high-tech elimination, from which in due course I emerged, at the touch of a button, into the sunny splendors of a Parisian afternoon.

Nothing is keeping our cities from installing these magnificent 1990s-style donnickers except 1990s-style domestic politics. One problem that immediately arose here was that of wheelchair access, required by law. I certainly would not deny the right of wheelchair-bound people to toilet facilities, but the troublesome fact is that making the street johns available to them creates a number of technical problems, not the least of which is that the facilities need to be expanded in diameter to a point beyond the capacity of most American metropolitan sidewalks. (There are other issues as well to deal with, considering the automated nature of these devices and the handicapped nature of the

handicapped person who might inadvertently become trapped inside one.)

It seemed for a time these difficulties were going to be solved in New York City, where, so I understand, trials of four or five different types of automated street toilets had been under way. But evidently, these studies have hit some new snag. Meanwhile, across the country in San Francisco, the process is entangled at the moment in a uniquely San Franciscan dispute having to do with putting advertising placards on the outside of the cubicles. The French company that makes the things has handsomely offered to supply the city by the Bay with a couple of dozen of them free of charge, in return for nothing more than the right to sell ad space on them. This proposal was doing well in municipal governmental circles until someone discovered that the manufacturers were apt to turn a *profit* on their generous donation this way. The profit motive is not regarded benignly by some very vocal San Franciscans, and revelations of potential money-making caused the gift to be voted down by the indignant Board of Supervisors, leading to an acrimonious public debate that is still going on. (The Frisco streets aren't getting to smell any sweeter, meanwhile.)

No doubt, the need being as urgent as it is, we will ultimately get our Parisian-style mechanical privies out here in California. At least we have overcome our inher-

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ent American puritanism to the point of being able to discuss openly the fact that living organisms periodically rid their bodies of waste matter; the discussion now has come down merely to little contemporary niceties of political necessity. In the Old World, where the processes that Americans quaintly hide behind such terms as pee-pee and doo-doo have always been taken for granted as the facts of life that they are, this is all handled in a much simpler way, and has been for thousands of years.

Roman cities were particularly well provided with public latrines, as you can see today when you visit the ruins of Pompeii or Herculaneum, or, in fact, almost any excavated ancient site in Italy. Inevitably you will come across an elaborate marble cacatorium in the center of town—ten or twenty stone seats lined up in a row, separated by raised ledges that often are decorated by sculptured figures of dolphins or sea-serpents. These were highly public latrines indeed, gathering-places where one met with one's friends, traded gossip, made business connections. Above the seats were niches that in ancient times held statuettes of the appropriate gods—Stercutius was the Roman god of ordure, Crepitus the god of convenience—to whom small offerings were made by the users of the facility. The walls of these establishments were adorned with bright frescoes or stuccoed reliefs and the ubiquitous Roman fountains.

As a rule the Romans didn't have elaborate toilet facilities within their own homes, though. They used basins and chamber-pots, which servants would empty from apartment-house windows into street drains outside. This sometimes had unfortunate consequences for passers-by, as the satirist Juvenal observed—"Clattering, the storm descends from heights unknown"—and eventually receptacles were placed on street corners in the hope of discouraging this air-borne dumping.

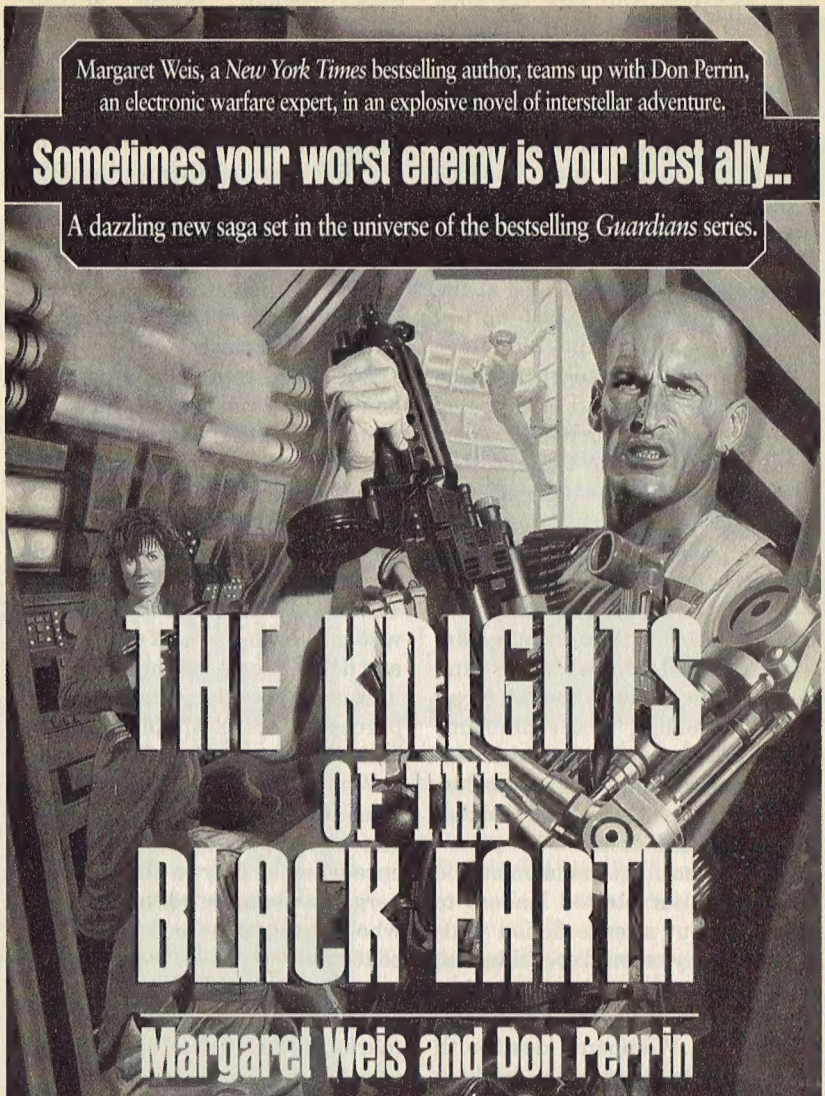
The Emperor Vespasian, who ruled from 69 to 79 A.D., was a thrifty and pragmatic sort who greatly increased the availability of these receptacles in Rome, and not only imposed a tax for their use but turned a profit for the public treasury by selling their contents to farmers for fertilizer and to wool-fullers as processing chemicals. He set up a number of new public latrines also. Vespasian's elder son, the future Emperor Titus, found all this a bit tacky and told the old man so, but Vespasian replied that he saw nothing wrong with deriving revenue from such a source. Pulling out a gold coin, he held it under Titus' nose and observed that gold doesn't smell, even when it comes from a urinal.

Vespasian thus won a small measure of immortality—for public urinals to this day are known as *vespasiani* in Rome and as *vespasiennes* in Paris. At least one of Vespasian's original installations is still in use in the Roman district

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of Trastevere. (But how the good emperor would be amazed by the washroom at the Ristorante Pietro Valentini, just off the Piazza Navona, where water flows automatically when you put your hands under the faucet, soap likewise comes magically from the soap dispenser, and hot air from an automatic hand-dryer! Would charges of sorcery have been leveled at the proprietor of such a facility in Imperial Rome?)

Undoubtedly the politicians who run our cities will, in the fullness of time, bring public urban sanitary facilities at least up to the level that Vespasian's Rome attained two thousand years ago. We can look forward, sooner or later, to automated conveniences that will meet the needs not only of our homeless population but even of ordinary taxpayers, who also have bladders and bowels. But is any thought being given, I wonder, to the problems that will arise some day when extraterrestrial visitors are wandering the streets of New York and San Francisco as tourists?

This is not, at the moment, a matter for our elected leaders to consider. But science fiction writers probably should be thinking about it a little. It's very likely that aliens *will* excrete—but how? (Stanley G. Weinbaum dealt with the question all the way back in 1934, in his classic short story "A Martian Odyssey." The first human explorers of the red planet discover a row of pyramids in the Martian desert fashioned from

small hollow bricks of silica—which turn out to be the fecal matter of a Martian life-form with a silicon-based body chemistry. Twenty years later, Sam Moskowitz ran an alchemical variation on the Weinbaum theme in "The Golden Pyramid"—his Martian explorers found a critter that ate lead, transmuted it to gold with the aid of an atomic pile in its belly, and brought forth neat pyramidal golden turds.

But those were aliens on their home turf. I can't recall, off hand, many stories that deal with the difficulties aliens will encounter when they try to perform their natural bodily functions while traveling on Earth. (Fritz Leiber did do one called "What's He Doing in There?" about a visiting Martian who goes into his host's bathroom and doesn't come out for hours. But it turns out the traveler from parched Mars is simply taking a bath. Are there others?)

What I should do, I suppose, is consult the indefatigable anthologist and expert on all things science-fictional, Martin Harry Greenberg. Marty is the editor, after all, who put together such specialized collections as *The Future I* (first-person stories), *The Future in Question* (stories with question-marks in their titles), and *The Science Fiction Weight Loss Book*. Yes, Marty would know, if anyone does. Why, it's altogether probable that he is, even as I speak, already hard at work on *Galactic Restrooms*—or will it be called *LooFantastic*? ●

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SITH SEASON

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Illustration by Kandis Elliot



“Any time now,” she said, not shifting her dark profile from the midnight sky.

“Sure.” Jonny Carter checked his camera indicator lights for the umpteenth time since sundown, then forced tired eyes to inspect the blaze of summer stars yet again. He’d seen five meteors, ten airplanes, three drifting pieces of space detritus left over from God-knows-what NASA mission, the Big Dipper, the North Star, and he’d even made out Cassiopeia for the first time, after three hours of piecing together half-remembered constellation charts with the gazillion possible combinations of stars visible above. He’d also gobbled on mosquito dope every half hour, had two pounding hard-ons (his mind drifted), and had wished for a drink at least forty times.

His neck kinked. He looked down at star reflections in the bog pond out past the sphagnum, rested back on his elbows (dew-soaked, as were the seat of his pants), and then turned to the dark silhouette sitting beside him on a hump of sedges.

“Any minute now,” she said again. “Be sure to keep your mind steady. Reception depends on the right encephalic waveforms.” In the dark, her husky voice could’ve been a man’s.

An eerie *churr* called over the meadow from a tamarack stand.

“What’s *that*?” Jonny tensed. “Izzat it?”

“Tree frog, moron.”

“Oh.” Jonny turned back to watch fireflies wink on and drift a few yards and then wink out, like travelers through dimensions. “I knew that.” He checked his camera again. Then laid down flat on his back and aimed the lens at his companion. The angle caught sedge-tops nodding around her elbows, her upturned face with its dead-serious expression, full backdrop of stars: Earth-to-Claudia-to-Astral-Plane-and-Points-Yonder.

Click.

She jerked her attention to the camera. “Will you *stop* taking pictures of me? You’ll need every shot you got when the rift opens. I’m telling you, this is the season for Siths.”

The camera’s enhancing software brought her irate expression through the viewfinder as though she were daylit. Jonny studied her wild, cave-woman’s hair, fierce odd eyes now dilated black, teeth bared in an angry grimace.

Click.

“God *damn* it, Carter—”

“All right, all right.” He sat up again. Now the whole back of his sweater was soaked. “Remember, it’s a digital camera, Claudia.” He patted a waterproof nylon pack-bag he’d taken off his shoulder and tucked

beside him on the wet meadow. A cord ran from the camera into the bag. "We got ten gigabytes waiting for pictures of your giant wasp."

"Sith!"

He shrugged. "Whatever."

She kept looking at him, silently and invisibly in the dark, but long enough to make icy chills dance up his backbone.

Suddenly a fuzzy greenish glow, like a monster firefly as big as a man's head, drifted some forty yards away over the mirror-calm surface of the bog pond. Jonny yelled, "Look! What the hell's that?" He stared long enough to hear a sizzling, insectlike whine from the glow before he remembered the camera.

Click click click—

His companion roughly grabbed his arm. "Don't waste shots. It's just a will-o'-the-wisp. Swamp gas."

He pulled his arm free and clicked some more. "I'll take it. It's just what we need to pull this story together. Hey—there's a couple more, right? See, on the other side of the pond?"

"What do you mean, 'pull the story together'? Those things are common phenomena. *Earth* phenomena. When the astral rift opens—"

He said it only because he was wet, cold, bug-bit and tired. *And* she was starting to give him the creeps. "Look, Claudia, I know *you* can see the boogymen and funny people from Mars and all that shit when the rift opens. But *I* gotta make *real* pictures for the readers, and swamp-gas willys are damnnear good as UFOs as far as I'm concerned. *Plenty* good. Let's go home now, eh?"

Her reply was slow and measured. "You never expected to take an astral trip, did you?"

"Listen, it doesn't matter. You gave me great copy, I got great shots, you in the swamp, looking up at the stars, and here are the willys—man, we might even get front page."

"Front page! When the rift opens, you'll have material for a Pulitzer! You *must* keep your mind tuned to the proper receptive—"

"Sure, Claudia. Now look. I'm wet, beat, I got images to digitize. You stay here, take the trip, and then see me tomorrow, okay? I promise, I'll use all the details. You'll be on Oprah before you know it." He stuffed the camera in the nylon bag, pulled up the shoulder strap and stood, amazed how stiff a man could get after three hours of soaking in bog juice.

She stood up too. With her dark skin, black jumpsuit and leather jacket, she seemed a shadow in the night as she loomed over him. Jonny hesitated, his backbone doing that funny dance again. He liked getting the UFO-type weirdo stories, and southern Wisconsin was a gold mine for them, but this suddenly felt a little *too* quirky. Especially with the

nearest farm eight miles distant, and her car bogged down a mile back on the prairie.

The shadow's hand went into the darkness of her jacket. Came out filled with something. Starlight gleamed from metal, and Jonny knew she hadn't brought along a camera of her own.

Her deep voice dropped another notch. "I can't tell you how much I hate people like you. Condescending, patronizing mockers. I *loathe* that."

Jonny wasn't cold or tired any more. He licked his lips without being able to moisten them. His knees felt loose. So did his bowels. "Look, we've been here since sundown. Nothing's happened. Maybe I just don't have the right brain stuff, you know? Hey, you take the camera." He snatched it out of the bag and held it in front of himself like a talisman. "I'll get out of here so you can make the currents right, okay?"

"Nothing's happened because you didn't even *try* to concentrate. This was important. This has ramifications for the entire planet. This is *breakthrough science*, and I gave it to you, mister hotshot photojournalist, so I *wouldn't* go through all that talk-show, *National Enquirer* bullshit." Her voice intimated a night-hidden, tooth-bared snarl on her face. "Swamp gas! You damned butthole. Just like the rest."

Click.

The muzzle flash and explosion both seemed worlds in collision with the heretofore placid, new-summer night.

"I need an observer who has credibility, Professor Farnsworth," she said in a husky tenor.

Charles D. Farnsworth examined his guest. Her beige blazer and tailored polyester shirtdress suggested a young woman grounded in the workaday world; yet there was *something* about her that resonated with his expedition specimens engulfing her on all sides. She seemed an eerie focal point for shellacked wing-footed toads suspended from ceiling fluorescents, Venus fly-traps under grow lights, small articulated skeletons of armadillos and iguanas, free-standing terraria of trilobites and coprolites, a mounted fetal mammoth he'd extracted from a mother melted out of a Siberian glacier. Even his expansive oak desk's assortment of Irish elk antlers, a stuffed fer-de-lance knotted around human skulls, and pots of insect-mimic orchids, seemed to frame her in a harmonizing, companionable way. Gradually Charles Farnsworth realized that it wasn't an oddness about her that struck him, but rather the opposite: surrounded by the world's exotica, she fit right in.

"Credibility," she repeated. "Unquestionable credentials, the highest ethical standards, and a zoological expertise in rare species that is second to none. Not to mention," she added, glancing around, "extensive field experience."

"Well, Ms. Czadakis," he said in all modesty, "you have found the right man."

When his graduate student had announced a woman visitor, he'd expected one of the middle-aged, gross-thighed women with old faces who solicited him for garden party lectures and identification of backyard birds; or worse, one of the twit-brained co-eds who just plain solicited him. Miz Claudia Champeaux Czadakis ("Chippewa bohunk," she explained) stood out from that crowd in virtually every aspect. She nearly matched Farnsworth's six-three. Her black hair appeared cut and combed by Einstein's barber. Its inky purity exaggerated an irregular white tuft curling through it. Likewise her wide-spaced eyes quite mismatched both her Native American complexion and each other, one being Siamese-cat-eye blue, the other a pearly gold, both nearly aglow. The features rang an indistinct bell: Oxford, a long-ago colloquium on a certain genetic defect . . . Farnsworth found himself inexplicably wondering if his guest's ears were ringing.

She did not relax her tense posture. "Sith. Banth. Thoat. Masena. Kaldane. Do those words mean anything to you, Professor Farnsworth?"

He blinked, mesmerized by how she seemed so much the center of the crowded office that he himself felt like the outsider. *Sith*, he considered. *Banth* . . . oh yes. "The *fearsome* Sith, the *mighty* Banth!" He steeped his fingers and let passages read over thirty years ago boil to the surface of his brain as though it were yesterday, when he'd been a boy at Eton, hiding old-even-then contraband amongst legitimate books on animal anatomy, physics, the Darwins.

"*'The slimy and fearsome silian,'*" he intoned, "*'whose wriggling thousands seethe the silent sea beneath the hurtling moons when the sun has gone and strange shapes walk through the Valley Dor.'*"

For a moment Claudia Czadakis appeared about to vent a rousing cheer. Then sob with relief. The next moment she stated, matter-of-factly, if not downright coldly, "As long as you are familiar with the works of Edgar Rice Burroughs, I won't have to summarize them now. Although you might wish to re-read the *Mars* series." She bent to an overstuffed travel bag beside her chair and extracted a sheaf of Manila paper. Wordlessly she pushed elk antlers and orchid pots aside and laid out pencil sketches of animals.

Farnsworth was drawn to them like filings to a magnet. An eight-legged, hairless horse with the head of a crocodile. A shark-mouthed lion. A hornet-striped, bat-winged flying creature. Four-armed apes. Tentacled creatures. One-eyed beasts. He recognized none. And then recognized all. They populated *A Princess of Mars*, *The Warlord of Mars*, *Swords of Mars*, *The Gods of Mars*. . . He glanced toward a row of small, worn, no-longer-contraband volumes on a distant shelf.

She explained, "I drew these last night in the astral dimensional rift I've discovered in the Dodge County preserves. I had hired a professional to take actual photographs, but he left before the rift opened." With a sarcastic inflection, she added, "Brain death begins with a lack of curiosity."

A cautious, little tap of warning somewhere in his mind went ignored as Farnsworth pored over the artwork. "You sketched these from—"

"Life. Yes." She finally broke her straight-backed pose and leaned over the oak desk and the drawings. "I'll be cogent. Burroughs, using a process dubbed 'astral travel,' took several trips in the early twentieth century to a place he mistook for Mars. He *did* name it Barsoom, perhaps suspecting it was not the same body as that existing in Earth's space-reality. He may, in fact, have been acting on clues provided by even earlier dimensional travelers. My point is, the concept of alternate worlds has long been disdained by the technological sciences, mainly due to lack of concrete documentation." Her smooth brown finger jammed down on one of the drawings. "I myself have vindicated Burroughs. I have entered several 'other worlds' that appear to be the wellsprings of much heretofore inexplicable phenomena on Earth, including out-of-body experiences, most psychic phenomena, and probably all reports in the 'apparition' genre: ghosts, aliens, demons, and madonnas, and so on. UFOs are most likely astral planar vehicles of other-side societies."

Charles D. Farnsworth sank back against his chair, fell immediately in love with his guest's erudition—if not her rare features—and warmed to a great upwelling of equally rare amusement. "Burroughs is one of the wellsprings of *fiction*," he chuckled.

She tensed. "Of course Burroughs was clever enough to record his travels disguised as insipid turn-of-the-century romances—the path to monetary gain as opposed to ridicule. Look what happened to Schiaparelli and Lowell when they turned their telescopes on Barsoom, which was inter-eclipsing the planet Mars at the time."

"'Inter-eclipsing'?"

"The astral planes overlap the same dimensional space only occasionally. Large scale, that is. I'm beginning to suspect the world's as punctured with little alternate-reality holes as Swiss cheese." Her mismatched eyes grew dreamy. "Get caught in one, and theoretically you'd be living two simultaneous existences altogether . . . at any rate, Burroughs recognized intuitively that Barsoom is the primary-level dimensional counterpart of our Mars. Due to the powerful attractions of its astral gravity to Earth's, it is an often-transposed space by Earthers and so-called 'Martians.' Anyone with a properly attuned mind can witness the phenomenon."

Farnsworth felt a silly grin on his face. He tried in vain to erase it.



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She obviously didn't like it, her serious expression awash with disapproval. That didn't stop him from thoroughly enjoying her fervor, unshakable by any such intrusions of logic as the suggestion that no NASA mind, nor any known astronomer's, possessed "proper tuning."

"Let me be clear about this," he said, leaning forward. "Earth and Mars, that is, Barsoom, are inter-eclipsing as we speak, and you are asking me to . . ." he couldn't quite get it out.

She nodded. "Accompany me on an astral trip. Yes."

Farnsworth slowly rose and looked around the congested office's variety of almost-fantastical, but quite Earthly, beasts. He perused the biological illustrations papering his walls between bookshelves, noting that some of the animals and plants were rendered by ancient artists who'd never seen the live creatures, and had to rely on anecdotes and older drawings of equally questionable accuracy. Farnsworth turned to a framed, hand-colored, fourteenth-century woodcut hanging behind his chair. The depicted entity was nearly a duplicate of one freshly sketched on twentieth-century paper, now lying on his desk.

A portion of his mind—in which resided three-decades-old passages from *A Princess of Mars*—instantly thought: *what if?*

Another portion started to laugh out loud.

And a third portion, which had never abandoned its tiny whisper of caution, suddenly began yelling.

So did a deep voice from behind. "Don't *laugh* at me!"

Even as Farnsworth turned from the old woodcut, he heard simultaneously the guest chair crash over backward and the immediately recognizable clack of a revolver cocking.

Charles D. Farnsworth saw blue/gold eyes and the stubby maw of a Charter Arms .38 and the finger on its trigger make that special tensing that was the last thing a lot of gunshot victims ever see, and he wasn't sure if it was his instantaneous reaction or the gun that exploded. The oak desk came up to meet his forehead and then he hit the floor, with the world turning white and his chair pulled down on top of him.

Professor, can you hear me? Farnsworth? Farnsworth!

"Call me Charley," his voice murmured in the darkness. "Everyone else in the inarticulate Godforsaken New World does." He perceived fingers kneading numb flesh at his hairline, realized the digits were attached to his own hand, and that his skull underneath an insensate scalp felt splintered all the way through his right cerebral hemisphere. He opened an eye. A sliver of light brought a swimming image of his office's ceiling, cleaved by a face with one powder-blue and one gold-yellow eye.

"Charley, then. You needn't get cynical. Come on, sit up." She propped him up against the desk without help from him.

Farnsworth heard a groan like a cow lowing, realized with no little consternation that it came from his own mouth, and made a concerted effort to come about. He finally noticed that her office-girl garb—polyester now peeked from the travel bag hanging from her shoulder—had been exchanged for leather: jacket, boots, very-tight-very-short shirt. He squinted at the mismatched eyes.

"Oh yes," he croaked. "Miss Claudia Champeaux Czadakis, Chippewa bohunk. Who just shot me for laughing at a six-hundred-year-old mandrake root."

"I didn't shoot you. You ducked right into the edge of your own desk. I've never seen such an overreaction."

He started to knead the violent pain stabbing through his forehead and growled through clenched teeth, "Sorry if I startled you, my dear. I have this habit of ducking when someone points a pistol at me."

"Then it's time we broke that habit. Now get up. I've lost all patience with people like you."

Something sinister in her tone made Farnsworth force an eyelid up again. With a sensation of déjà vu he sharpened his blurry gaze on the speaking end of the .38. If adrenaline squirted into his bloodstream this time, it short-circuited enroute. He must've faded for a moment: Claudia's miniskirt had been replaced with a neck-to-ankles black jumpsuit. "Might I ask what this is all about?"

"I need you for verification. I won't take no for an answer. Neither you nor any other skeptic will laugh at me again. The Dodge County inter-eclipse will be at maximum tonight, and you and I are going to take full advantage of it."

His senses returned more or less to full speed. "Good Lord. I'm being kidnapped?" He squelched a germinating smile of bemusement.

"Call it what you like. We are going to Barsoom, Charley." She wrapped long fingers around his arm and tugged.

Farnsworth struggled up, feeling stronger by the moment. Strong enough to slug her (he could forsake British civility when the situation demanded), confiscate the revolver and give her a good tongue-lashing. But her bizarre story twirled through his brain—half of his brain, that is; one half was decidedly occupied with a macerated fuzziness—and culminated in that same pinnacle of intrigue and fascination he'd had just before his guest took offense at his mirth. Part of him really did believe her; people were often *mistaken* about things they'd seen or heard, but Charles Farnsworth had followed many an impossible tale down roads to undeniable fact. Who knows what he might find as the cause of Claudia Czadakis's "astral plane" adventures. Had her Native American heritage provided some hallucinatory herb? Had her adventures in geologically arcane Dodge County brought her to a gas-emitting fen? Or had her genetic aberrations—

Angel-Eye Syndrome. He recalled the name for it now (an amazing feat in itself, considering his pounding head). One of a category of Waardenburgian gene defects resulting in, among other things, blue-eye deformities and piebald hair. —And hearing abnormalities ranging from simple ringing to Joan of Arc's "radio" tinnitus—the perception of sounds where in actuality there were none. Sounds which sometimes drove the sufferer into a dementia that altered meaningless, relentless noise into understandable voices, music, conversations, anything to make the torment bearable.

That's it, he thought. And her madness doubtlessly provided visions to help explain the auditory hallucinations. The poor dear girl. How ghastly. How *interesting*.

"All right," he said to her waiting blue and yellow gaze. "Lead me to Barsoom. But first, do allow me to fetch an aspirin. And," he ventured hopefully, "My field jacket?" He gestured toward his narrow closet. "Dodge County mud is *so* impossible in tweeds."

She almost seemed to smirk. "Get your jacket. You'll need it. *And* that four-wheel-drive monster parked next to the building."

Her reference, to Farnsworth's pleasant surprise, was to the Zoology Department's research vehicle, a rust-dabbed blue Suburban. With that, he found himself quite up for the whole adventure. Especially since the Zoology vehicle was equipped with a shortwave radio and emergency homing signal, and his heavy safari jacket held, unnoticed within its coarse khaki folds, the built-in armpit case containing his Smith & Wesson .45, and a generous number of clips tucked here and there in inside pockets (a bit of subterfuge garnered at biologically interesting, but politically unstable research sites). The jacket was rather his trademark, although the weapon it carried normally stayed locked up at home. He'd returned from Cambodia just last Tuesday with a delicate collection of centipedes that needed immediate housing, however, and he'd come straight from the airport, closeted the jacket—well, it was fortuitous.

Thirty miles out of Madison, they turned down weaving, graveled back roads, thence onto two-rut lanes through rolling prairie lands and miring wetlands pocking the county's nearly confluent tracks of wildlife preserves and public hunting grounds.

Farnsworth remembered looking down on the area from a very-high-flying military plane one night during a rather silly period of UFO reports—southern Wisconsin, and Dodge County in particular, were renowned for such never-substantiated sightings. From that great height, Dodge appeared as a dark polygon without depth or solidity, surrounded by counties whose sparse farmyard lights and intermittent dairy towns sparkled, by comparison, with substance.

* * *

Farnsworth twisted a cramp from his neck and looked around the wet meadow. A blaze of stars in the bright June night silvered the bowed crests of dewy sedges and gleamed from young needles on tamarack trees edging a bog pond. The acid water's mirror-calm surface seemed a window to a sunken sky. Fireflies softened the metallic burnish of starshine with uncountable tiny green bursts of quieter light. A *whurr* of chorus frogs sounded from all around. Deep in the preserve, Farnsworth could see no light of human manufacture anywhere, save for starlight gleaming from buckles and snaps on their own jackets, and the soft shine on cleaner parts of the splattered Suburban, mired some fifty paces behind them.

He found himself comparing the Wisconsin night with a setting in an English countryside; weighing how even serene prairieland in the New World somehow felt wild and vibrant, ever untamed no matter how cut and attenuated by plows and concrete, never offering that feeling of *domesticity* trampled into Old World meadows, which had hosted the rise of humankind, felt human footfalls and cradled human graves, for too long a day.

On the other hand there was something equally—mesmerizing—about Claudia Czadakis. With effort he forced his gaze from her night-shadowed features and concentrated on the sky as he'd been ordered. . . .

. . . He was in the Suburban's backbed and had been for some time and had to put aside the unsettling notion that he was sitting out on the prairie too and Claudia's hot mouth was under his and had been for a long time.

He tongued her teeth then kissed her cheek and below her earlobe. Her lips lowered to his throat and she kissed and sucked and her fingers worked along his nape and into his hair.

"Dear Claudia," he breathed heavily, "when you came to my office this afternoon I had no idea—"

"That it was you I wanted all along?" The tip of her tongue flicked into his ear. Her hands moved down his open shirt. She petted up and down his ribs, over his stomach, into the mat on his chest, up and down. "You are such an arrogant Brit." She pressed against him on the Suburban's coarse backbed carpeting. "It's just that I knew there'd be a long wait until midnight."

"The moment you sat down in my office," he murmured, "I sensed how you seemed so perfect there—"

"In what way?"

"All that I love is in that office. All the fabulous mysteries of the world."

"More than one world, Charley. . . ."

The monotonous churrr of chorus frogs surrounded the Zoology research vehicle; somewhere nearby a woodcock pinged in its courtship flight. Damp meadow air drifted in along with mosquitoes and a few fireflies from the bog down in the hollow—where he was sitting. Or had been sitting. Or had never sat. Things didn't seem clear on that matter.

But another matter presently at hand was eminently clear. Charles D. Farnsworth did not notice the mosquitoes and felt glad for the evening coolness. He was sweating and tasted salt on her breast and felt the wetness on the small of her back beneath her short leather skirt hiked up to her waist.

The new night grew darker; the fireflies discovered their entrapment and flashed in spasms inside the car windows. . . .

"You're drifting, Farnsworth." A leather-clad elbow jabbed his arm. "It'll happen any minute now. I can feel it. *Focus*," Claudia admonished.

"Couldn't we sit in the car?" He thumbed at the Suburban, thinking more of its cushioned bench seats than its shortwave radio, which his abductress thought she'd disabled.

Claudia shook her head. "You can't concentrate around gas stink and metal. Why do you think no one makes contact with the rift worlds anymore? *Good* contact, that is. Flash of a scene, glimpse of an astral beast, then comes a damn cellular phone signal or a misfiring lawnmower sparkplug—*poof*, disruption. Another missed opportunity, another nonsense reporting of Jesus Christ in Poltergeist City."

Farnsworth rubbed his pounding head. "I should really like to sit, or better yet, lie, on something dry and soft. I fear our little episode in the office quite disrupted any opportunity for concentration on my part." He stood up and took a step—

The explosion of Claudia's .38 split the night's peace like a sonic wedge.

"Focus, dammit! Just open your—" The handgun, still aimed skyward, abruptly pointed like a finger. "Look! Isn't that star getting redder?"

Automatically Farnsworth squinted upward. For a singular moment his throbbing headache went unnoticed, his eyes ignored the popping firefly display, his ringing ears strained for something other than frogs.

And a star, maybe the one he was supposed to see or maybe another one, or maybe some will-o'-the-wisp igniting much closer than the stars, suddenly burst into a blinding white flash that filled his vision and swept over his senses like a tide of effervescent milk.

Floating, in bright pure whiteness all around. It seemed he had limbs and a body and eyes; concentrating, he could look down at himself and almost see his dark tweed suit and white shirt and proper tie, his usual professorial attire. His distant shoes were vaporous in the foglike glare.

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A glance at his hands revealed the golden sparkle of his Rolex peeking from his cuffs. His ringless fingers spread out in the light, feeling a cotton etheriality like salt fog rolling in from a silent sea.

He slowly began to divine surroundings. For a disorienting moment he expected to see an open prairie, not an enclosed space delineated by walls and ceiling and floor. All white, he in an intersection of two walls—and the ceiling! *Hovering*. Instinct sent his hands flying to grasp something, anything, but he did not fall from his height; in fact when he put disbelieving fingers to the ceiling touching his head, his hand sunk into the sound-absorbing tile as though through fresh snow.

He looked down. A room. With forming, yet indistinct objects, much whiteness, this time the solid surface of white drapery. Then figures. Hazy. And equipment, electronic, with tiny indicator lights: red, green, yellow, the first bright color to materialize in the room. . . .

“Farnsworth. Farnsworth! *Charley*.”

He blinked in confusion at summer stars above, the tips and heads of marsh sedges, Claudia Czadakis bowing over him. He sat up, shrugging his jacket lapels earnestly enough to perceive that his Smith & Wesson still resided next to his ribs. “I say,” he heard himself groan, “I believe I passed out for a moment. Claudia, my head is *splitting*. As much as I truly want to attend your rift opening, I may be forced to admit a need for the services of an emergency room. In fact, I just fancied I was already in one.”

She grabbed his shoulder and shook hard. “We’ll both need an emergency room if you don’t start operating on all burners, Charley. The rift *already* opened. Only this time—”

He forced away vertigo and watched Claudia Czadakis’s eyes, now perfectly matched by pupils dilated from darkness and, Farnsworth easily perceived, fear. “‘Only this time’ what?” he asked gruffly.

The black gaze turned irate. “It’s your fault. I should have known, God damn it. You and your busted head, all the wrong vibrations—”

“*My* fault! *What?*”

“Involution! Probably the first time since the late Jurassic.” She pursed her mouth and searched the summer sky, which seemed, at the moment, quite placid and Wisconsin-y to Farnsworth. “The Earth is the stronger astral plane world,” she explained in a forced and hurried whisper. “When the rifts open, we are transported to the weaker dimension. Think of us as gases under higher pressure. Burroughs went to Mars, but nothing of the astral Mars was ever able to come here, in his lifetime. That’s why there’s never any physical evidence after astral projection sightings—people get a glimpse, sometimes even stand on the threshold of

the dimensional gateway—but nothing comes over, they can't bring anything back—”

Farnsworth rubbed his forehead. He found it impossible to follow her blather this time. “Can’t come back—*Burroughs* came back. Again and again, if I remember the stories—”

“Of course he came back! Last night *I* left and came back. Earth tethers us like paddle-balls on rubber strings. When the rift closes we come back whether we want to or not. Only *this* time—”

Farnsworth studied her anxiety. He sat up straighter and searched the vicinity as diligently as she did, not knowing what he was looking for. *How unfortunate that I missed the moment of revelation*, he thought cynically. *How typical*. “So what happened *this* time?” he stage-whispered back. “Are we stuck here? I must say, Mars has a quite remarkable resemblance to Dodge County. One would swear we had not moved an inch.”

Claudia balled exasperated fists. “We haven’t, you moron. Barsoom came *here!* The rift opened with an inverse vacuum. A dimensional bubble shot in *here!* To Earth! Who knows *what* it carried. Godssake, Charley, it’s the season for Siths, and you had to screw up the focus and the currents and—”

“And so bloody what? You said when your rift closes it’ll suck its leavings back.”

“The rift *already* closed,” she countered with deadly earnestness. “And whatever came over is *still here*.”

“In that case a big-game dart gun should provide you all the vindication you need.” He remembered wishing, as a boy, to transport just once on the bright red light of Mars, from tame and lion-less England into the exciting world of Barsoom. Dodge County, Wisconsin, was as close as he’d ever come if he didn’t get X-rayed soon. He bowed his head into a hand and said, “See here, Claudia, now that your rift has come and gone, may we please retire to our vehicle? I should dearly like to get out of the damp. And indulge in another aspirin.”

“Yes, I agree. It’s our only cover for—” She suddenly crouched beside him. “Hear that?” she gasped.

An Angel-Eye Syndrome auditory hallucination, he suspected. Only natural sounds filled the meadow.

Then he heard a distant, slow rhythm, *flup . . . flup . . . flup*, as though some farmwife were shaking dust from a large throw-rug in the dead of night.

The beats circled nearer and invisibly at treetop height, abruptly stopping somewhere across the bog pond. One of the large tamaracks silhouetted like flat black ink against the night sky shook violently, then slowly swayed to stillness again.

"Sith," Claudia hissed.

The white haze cleared, sharpened. Walls, ceiling, floor, sheets were still all white, but as he looked down from his hovering position he now perceived the ICU in perfect clarity: a monitor's green blip tracing heart rhythms, the click-click of a drug box metronomically ladling some chemical into an intravenous tube, the airy hiss of oxygen leaking through a hose into the patient's mouth, and the patient—a handsome fortyish, well-muscled yet trim man, black hair with just a hint of gray spreading stringy and disarrayed around his face, who slept as inanimate and nearly as white as the sheets, save for the neat, bruised red hole in his forehead, above the right eye and below the hairline.

A doctor in green scrubs peered at the hole, and Farnsworth tried to get a closer look too. He found himself unable to swim, as it were, down and nearer the patient, but even from across the intensive care unit he knew that the little hole was the caliber of a Charter Arms .38 slug.

If there's an exit hole, it's probably quite small, he considered, not like what a mushrooming soft-nose would do. If that were the case, the patient would be occupying a slab in the morgue. And if the bullet was still inside—no indication of surgery to remove it—what would be the damage?

She was standing directly in front of me, the .38 raised to waist-level. Okay, the bullet would have gone in rising; if it had not ricocheted internally off the brain case it may have only perforated the forebrain. Perhaps some loss of memory, a slight interference with right-brain functions, visualizing concepts and so on. Perhaps nothing noticeable at all; soldiers have survived amazingly destructive brain injuries without incapacitation. I could live with that. But if the bullet's course altered as it penetrated the skull, skewed through the entire hemisphere, perhaps into the pons, the cerebellum—

"I'm afraid I cannot accept life as a vegetable." As Farnsworth looked for an exit, then remembered he could penetrate the walls and ceiling at will, he heard his name.

"Charley," said one of the two other figures at the bedside, whom he hadn't paid mind to. He now recognized his graduate student. "Hang in there," pleaded the wrenching voice. "You're one tough Brit. You're one lucky Brit, remember, Charley?"

"Aw, bloody hell, Jake," Farnsworth murmured. No one looked up at the sound of his voice. He studied the third person in the room, a young woman he didn't recognize. She had a police detective's badge fastened crookedly to her blazer lapel and she carried a peculiar camera that seemed plugged into a blue pack-bag slung from her shoulder.

"Charley," said Jake's voice, slightly off-key. . . .



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"Charley. You still with me here?"

He blinked, felt the Suburban's seat springs poking his spine, then saw brightening dawn sky through mud-dotted back windows. Claudia Czadakis's wide-eyed, blue-and-yellow stare looked down at him from the front seat.

"Nap time's over," she said. "Now, I'm pretty sure my .38 will bring down a Sith. Their bones are porous. Burroughs hacked one to death with a broad-sword."

Farnsworth shoved his disorientation aside and tried to sort and arrange his recent memories, which seemed two—or was it three?—different sets heaped one atop the other. Horrid to go balmy and *know* it, he thought.

Claudia's head snapped toward the windshield. "Here we go!"

Farnsworth looked up. The tamaracks across the bog pond were thrashing in the windless morning. A yellow-orange shape like a cross between a hornet and a pteranodon took to the sky with one explosive pump of leathery wings. At least as bulky as a dairy cow, it circled the meadow with odd, too-slow flaps, the wings' bat-like bone structure plainly visible. Six legs curled beneath the long body, the limbs heavy-muscled, the digits impressively clawed. Hide gleamed like wet skin, its bright color broken by crooked black stripes that merged to solid black at the tip of the abdomen, from which protruded a stinger capable of skewering three human adversaries at once.

A pair of either antennae or long skinny ears bobbed and rotated above bulging eyes, which even across the meadow sparkled with facets. The wide, dagger-toothed mouth opened in a sizzling shriek as the creature barely missed a treetop, clumsily breaking several topmost branches as it struggled for altitude.

"I didn't think they would fly at all in Earth's gravity," Claudia murmured.

"I believe they're telekinetic to a degree," Farnsworth said. "I remember doing a size-mass ratio on them once—the only explanation for most of Burroughs' beasts was some innate capability of levitation. They were too big to be so agile, otherwise—I say! There's another!"

From a roost on the ground a second slow-flapping monster rose above the bog tamaracks.

"It's *blue*," Claudia exclaimed. "Siths are supposed to look like wasps!"

Farnsworth turned a zoologist's eye on the new beast, now ponderously gaining the sky and looping around the first creature. "If I recall, Burroughs only encountered one such animal. Perhaps there're several color morphs."

The two Siths circled ever more closely, the morning peace shattered

by their calls and the motorlike beating of wings that appeared to flap utterly without reason, save to provide the appearance of flight. Like crudely manufactured Hollywood automatons, the creatures flew ostensibly in the face of aerodynamic physics. Yet they not only gained altitude, they engaged in a clumsy ballet that culminated in more conventional activity, which Farnsworth recognized at once. "My word. That's courtship behavior."

Claudia blinked neither blue nor yellow eye. "Ah, that's a little beyond courtship."

The two beasts glided nearer the car. Farnsworth craned his neck to follow their flight as it moved directly over the Suburban. "At least it explains the color differences. Males are blue. Burroughs must have been attacked by a female. Guarding a nest, perhaps."

"You make it sound like Burroughs ran motherhood through with his broadsword. Where are they? I've lost track of—"

Whump! The Suburban rocked violently, twisting askew in the rutted prairie path. A dark shadow sped away down the meadow. The blue Sith glided on set wings low over the bog pond, then arced upward and began a wide turn.

"Charley—it hit the car!"

Farnsworth followed the flight of the male Sith. The yellow-and-black female evidently still hovered directly overhead. Her blue mate was circling back, its cobalt eyes fastened on the Zoology Department's battered, and *blue*, research vehicle. "It's charging the car like a rival."

Whump! A great blue body at least as massive as the Suburban hammered against the roof. Both sides of the car were grasped by six paws' worth of black claws like sickles, squealing and scraping for a grip. The Suburban rose into the air.

Farnsworth rolled against the latch of the only door without a foot pressing against it. At his gesture, Claudia, crawling and falling, joined him in the back seat. "Get ready to jump," he ordered. "Pond's the closest cover. Run for it and dive in. Swim into the thickest shoreline vegetation you can. *Now.*" Farnsworth yanked the latch. He and Claudia tumbled to the ground. The car tilted and quavered at shoulder-height and they rolled away from it as the great blue beast, claws sunk into blowing tires, bit at the hapless vehicle's tailgate latch.

Farnsworth leaped to his feet and sprinted for the pond.

Behind him he heard three snapping reports from Claudia's .38. "*Charley,*" she bawled, "*it's got me!*"

Farnsworth brought the Smith & Wesson out and to bear in a motion as he whirled to see the striped Sith knock Claudia hard in the back. She fell heavily, her handgun flying. A thundering Browning hollow-point ripped a hole in the webbing of the Sith's right wing; a second shot

ventilated the left. The creature shrieked and tried ponderously to regain the sky. Farnsworth ran back to the fallen woman and yanked her up. Her little revolver lay at their feet.

She stared at it wordlessly, then at his .45.

He picked up her gun and shoved it into her hand. "Conserve ammo," he ordered. "We don't know where their kill points are. And I'd rather capture them alive."

And then they were running, hitting wet ground and then the floating sphagnum mat that caught their feet like deep tar. Open water lay another twenty strides away. Wing-beat gusts blew against their backs.

Claudia screamed and suddenly lofted into the air. Farnsworth grabbed her knees. As his own feet left the ground he saw Claudia hung by one shoulder from the blue Sith's scimitar-curved stinger. Farnsworth emptied the Smith & Wesson at the stinger's base. The impact of the slugs and the weight of two bodies snapped the Sith's weapon, dropping man and woman twenty feet down to the spongy bog mat.

Farnsworth fell flat on his back; Claudia landed beside him. Breathless, he pushed another clip into the .45 and watched the blue Sith circle higher and higher. He tried to catch a glimpse of its striped mate as he pulled at the crowbar-thick stinger, its tip piercing the shoulder of Claudia's leather jacket like a fishhook. It worked free and he tossed it aside.

"Claudia," he panted, "can you get up?"

"Yeah, 'm okay," she grunted, also winded. She shook her white-splashed hair and struggled up beside him. Froze. Pointed. "Charley!"

He whirled. Like an avenging Roc, the yellow and black female Sith soared straight toward them across the bog's open water. The Barsoomian beast's crocodile jaws gaped. The *whup-whup-whup* of its too-slow wingbeats punctuated with a *splat-splat-splat* as the bony, clawed tips struck the surface of the pond with each stroke.

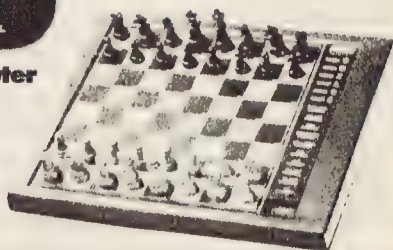
Within two wingbeats Farnsworth had emptied the .45 again. Slugs that would have ripped the guts from any Earthly beast passed through the Sith as if the creature were air. By one more wing-stroke Farnsworth had exchanged the Smith & Wesson for the broken stinger from the blue male. "*Hit the dirt!*" He pushed Claudia down just as the Sith's jaws snapped viciously shut on empty air and the beast passed swiftly between them, the amputated stinger driven into its throat. Farnsworth caught the low-flying wing's edge on a shoulder and was dashed to the wet mat. He struggled up immediately, found that Claudia had been clipped in the side of the head by the other wing and was stunned nearly senseless. He yelled, trying to rouse her before the next onslaught. Claudia's ancestors on both sides had imbued her with toughness; she shook off the effects and stumbled on, submergence in the bog pond their only hope of sanctuary.

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They dove forward, seeing a Sith shadow on the water even as they broke the surface, and sank down, down, into the pond's cold, tea-brown acid depths. Farnsworth lost contact with his companion and struck out for the thick bogberry shrubs on the far side of the pond. He'd swum three times as far underwater in calmer circumstances, but his lungs had been empty when he'd plunged and they were on fire by the time he blindly hit roots and came up in a snarl of twigs and young foliage.

He looked back. Claudia paddled weakly in the center of the pond. He remembered the stinger he'd pulled from her, then saw the two Siths circling one another high up, distantly. The male had the impaling stinger in his teeth and was trying to extract it from his mate, who appeared in annoyingly little distress. Farnsworth pushed away from his cover and stroked urgently toward the struggling woman. "Claudia!"

"Sorry, Farnsworth," she gasped, managing a cynical smile that kept sinking into the tarry brown water. "I've been in better shape."

"Quite, and the same for myself." Though if he still had a headache, he was far too preoccupied to perceive it. "Come, the shrubs will give us cover." He kept an eye on the Siths. They'd stopped circling. Sun glinted on their smooth bodies as they assumed a side-by-side formation and set their wings. A crescendoing whistle accompanied their dive toward the center of the bog pond. "Swim for it," Farnsworth yelled, grabbing Claudia's jacket collar with one hand and thrashing all he was worth with the other.

Behind them, the siren of the Siths' power dive howled the monsters' nearness—

—Rising through it from the pond's opposite shore thundered a roar that depth-charged through the water and instantly suspended the efforts of the swimmers.

Farnsworth twisted around. The Siths had pulled up with a jerk that left them hovering just at the water's edge behind. Wind generated from their vibrating wings rippled the pond and blew on his face. The jaws of the monsters gaped; their combined high shriek rang out.

The deep-booming roar answered.

"Charley!" Claudia's pointing finger trembled. A tawny head towered above the brush where Farnsworth had found three seconds' refuge a long moment ago. A face like a whale-shark's rose up. A mouth filled with allosaur's teeth grinned wide beneath globular pea-green eyes. Tiny ears flicked to and fro in a wiry mane the color of butterscotch. The beast pushed through the bogbush tangle until it stood at the very edge of the water, its forefeet buried more than half their length into the soft sphagnum. It would have sunk entirely through, Farnsworth suspected, had its weight not been distributed on ten limbs—hidden in the thick

vegetation at the creature's withers, but perfectly clear in Farnsworth's thirty-year-old memories.

"My God," Claudia moaned. "It's a Banth."

The patient struggled to look at the three people next to the bed. From his ceiling corner, Farnsworth watched the brown eyes he'd seen in the mirror during uncountable early morning shaves. The patient blinked into vague consciousness and aimed one eye, not the other, on a square plate held before him by the woman with the police detective's badge.

Farnsworth tried to float closer; though he remained where he was, somehow his perceptions moved a little closer, and he divined that the plate was a small electronic device, a view screen. Its power cord led to the blue nylon bag hanging from the woman's shoulder. She said, "Do you recognize the person in this picture, Professor Farnsworth?"

The patient's one eye aimed toward the screen. His other eye, the one below the neat round forehead hole, stared dilated and frozen straight ahead.

"Don't try to talk, Professor," said the doctor, bending low. "Blink twice for yes, three for no."

Farnsworth watched his student take over holding up the little screen. "Charley, listen," said the young man, tears running in rivulets down his cheeks, "this bag's got an electronic camera that radios every picture back to a desktop computer. A photojournalist guy had a camera like this." Jake's voice caught. The policewoman put her hand on his shoulder.

Back in his corner, Farnsworth couldn't help noticing what a lovely couple they made. And then he thought, *Claudia and I make a handsome couple, too. And then: Who's Claudia?*

Jake continued, "We can't find this guy, we can't find his camera, but we think this is the last picture he ever took. Can you see?"

The patient seemed to study the image. He did not move. He was prevented from speaking by the plastic hose in his mouth.

The policewoman tapped a finger on the LC screen. "This lady's name was written on the guy's appointment calendar. She's aiming the gun and it looks like she's already pulling the trigger. Now Jake remembers showing her into your office and her car is still parked by the Zoology building. Professor, did this woman shoot you?"

The three witnesses held their breaths. The patient remained motionless.

The single functional eye, blinking neither yes nor no, lost focus and dilated.

"I say . . ." Farnsworth choked aloud from above.

* * *

With each challenging shriek the Siths moved closer and higher, inching awkwardly across the pond. Soon their hovering flight frothed the water nearly over the heads of the two now-ignored humans, treading with uncertain horror there. Roars boomed like blast concussions from the monstrous Banth on the opposite side of the pond. The great ten-limbed creature, its elongated body a man's height at the two forward withers, trampled the bogberries as it paced back and forth with cat's agility. During its posturing and whirling Farnsworth saw its long, club-tipped tail lashing, giving the Banth an overall length of not less than twenty feet. It moved with liquid grace, too fast for an animal its size. It sank into the saturated soil up past its broad, armed paws, but not deeply enough for its weight. Like the Siths, the Banth of Barsoom seemed to obey different laws of inertia and gravity.

The Siths continued to either encourage or protect each other, working themselves up for confrontation. The Banth appeared to grin as its spitting and roaring provoked them a little closer, a little closer. And they came closer. And the Banth ran out of patience.

Mighty hind legs, three sets of them, kicked off the bog mat, the thrust sending a pressure wave curling across the surface of the pond and lofting the Banth fully into the air. Two pairs of thick-muscle forearms reached out, claws extended.

At the crest of that leap, in a three-second aerial ballet that seemed to suspend time endlessly, the striped Sith with her mate's stinger still impaling her throat dove between the reaching anterior forearms and thrust her own weapon deep into the Banth's gaping mouth. Triple rows of sharklike teeth snapped down on her stinger and the lower half of her curled abdomen. At the same instant the male Sith, over his mate's head and wings beating in tandem, yawned wide and sank the spread of his dagger fangs into melon-round, pea-green eyes. Falling, the Banth's foremost pair of rapier-tipped paws stilled the male's wings; the secondary claws ripped and crumpled the female's. In that deadly embrace the three embattled creatures cleaved the surface of the bog pond, hurling up a wall of brown water, the crater hollowed for a full breath before the wave crashed down and up again in a geyser reaching into the sky. . . .

. . . Deep, deep in the dark clean water, over rainbow coral beds festooned with gaudy nudibranchs and purple urchins, Charles D. Farnsworth swam like a sea creature next to Claudia Czadakis, their naked bodies cleaving the aquamarine world, their kisses exchanged back and forth without interrupting the smooth glide toward the light. Their heads broke surface and they laughed with the ease of irresponsible lovers.

"Sweet Charley," Claudia crooned, "my lovely Charles Dickens Farnsworth. What a team we make."

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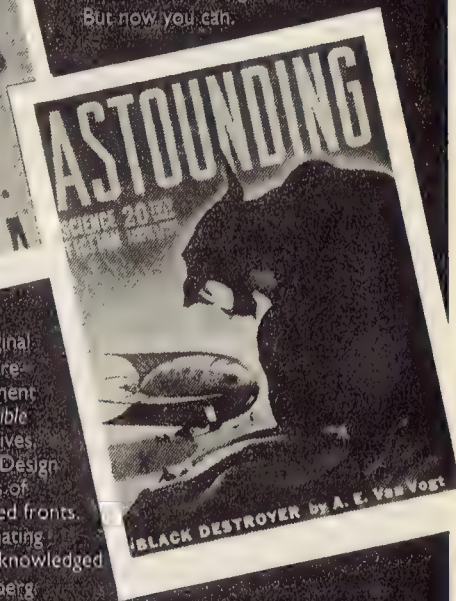
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"Such a wonderful coincidence," he said softly, tasting the sea on her lips, "that of all the zoologists in the world, you should come to me." Kiss. "How rare that I may be the first scientist on Earth to work with the first astral planar naught." Kiss kiss kiss. "How lucky—" Slow, deep kiss, sinking underwater, bobbing up again, "that she is so incredibly lovely."

They vanished below the surface for a long moment. When they finally surfaced he stared into her marvelous Angel-Eye gaze, always a surprise, the bright blue, the bright gold, glowing embodiment of tropical sea and sun.

Quietly, they drifted side by side on the green-blue surface of the sea. . . .

The tangle of bogbrush ripped at them like skeletal fingers. On that side of the pond, however, the meadow sloped more steeply, and once out of the murky, roiled water and past the snarl, their staggering footsteps found prairie grass and solid ground.

Claudia fell limply. Farnsworth dropped to his knees beside her and looked back. Bubbles rose in the middle of the bog pond to cast concentric ripples over the surface. He squinted at the trees, the meadow, the horizon as far as he could see it all around.

The world seemed finally at rest.

He turned his attention to his companion. "Claudia?" He wiped the white forelock away from her brow; a ripple of pain pulled her dark lips away from perfect teeth. "We've survived," he reassured her. "The beasts have drowned themselves, incredible as it seems."

Her breathing eased. "Not so incredible, Charley. Barsoom is almost as arid as Mars. No Sith or Banth ever saw a pond, or lake or even a river. They had no experience with any open body of water."

"More's the pity. But their carcasses can be retrieved. You—and Burroughs—shall be quite vindicated."

At that Claudia Champeaux Czadakis smiled.

As Farnsworth looked deeply into her captivating, mismatched eyes, the meadow, indeed the world's very linchpins, seemed to waver for an instant. "Let's see to your shoulder," he murmured, unable to shake unnerving disorientation.

"I don't think it's anything. He mainly hooked my jacket." She sat up and tugged at her sodden leather jacket. Without hesitation she also stripped off her black turtleneck, wringing it out as Farnsworth forced his attention to her wound. The Sith's stinger had left a deep gouge, but the leather had protected her from serious injury.

"Nothing a few stitches won't put right," he said, "although I daresay you came damn close to being skewered on that meat hook."

"Yours is the only meat hook I want to be skewered on," she said,

winking her blue eye. With outrageously false modesty she tugged her skirt hem down to mid-thigh.

As heat rose to his face, Farnsworth caught himself puzzling at the skirt. *Hadn't she been wearing a jumpsuit?* He wondered at the odd notion, recalling last night in the car—she'd been wearing the skirt, and nearly around her neck.

"Shall we move on before we're both skewered by pneumonia?" He helped her up, placing her leather jacket gently over her shoulders. Farnsworth took off his own dripping field jacket. And realized his Smith & Wesson was not in its built-in holster.

When they'd skirted the pond, he stopped and explained, "I'm going to fetch my pistol. I know right where I dropped it."

Claudia searched him wordlessly; he motioned her on to the Suburban, resting miraculously upright at the top of the meadow. He turned to the pond area where they'd made their leap for life.

Water-filled, deep bootprints easily led him to the silver gleam of his .45, resting on moss where he'd ducked the Sith's oncoming charge across the pond. The clip was expended, but he holstered the weapon empty. No reason to load a firearm in desperate need of cleaning.

As he took a last look at the fateful pond, a bulge of bright blue nylon caught his eye.

With a sudden clear memory of a blue nylon bag last seen in a dying man's hospital room, he knew before he lifted an identical bag from the bog water that he would find an electronic transmitter camera inside. And he wasn't too further surprised to find a dead man's hand still tangled in the camera bag's twisted shoulder strap.

"Don't bother hauling him out."

Farnsworth whirled to find himself the target of mismatched eyes and the muzzle of the Charter Arms .38—that he himself had placed in her hand.

"He was one more damned asshole who wasted the opportunity of his lifetime." Claudia's voice seemed to have dropped an entire octave. She stood in the blaze of mid-morning sunshine like a shadow, her neck-to-toe black jumpsuit absorbing light and rendering her a depthless space ripped in the fabric of the world.

Farnsworth felt a weakness steal over him, not from facing what looked like sure death, but something more, sucking his energy and fracturing his perceptions. A deep stab of sadness, of betrayal, pierced his heart. *But I loved her—*

A more physical stab of agony staked through his forehead and he blinked away a wave of vertigo crossing his field of vision. *She is a murderer who has killed two men in cold blood—*

No, she is a blameless victim of genetic disease, who hears voices and is compelled to provide them reason and justification, who imagines fictional creations clothed in flesh and blood, a madwoman awash in psychotic delirium—

Her .38 and the world exploded with thunder and bright light. Farnsworth flung himself down, assisted by suddenly strengthless legs. He never took his eyes from his assailant, who just as suddenly danced as though shaken on puppet's strings, and the thunder banged on and again, and then the strings were cut. Claudia Champeaux Czadakis dropped lifelessly to the bog mat. Behind her stood a husky young man with a waxen face and beside him a young woman with a badge and a smoking police revolver.

"We got to do something about the car's homing signal, Charley," Jake said from the other side of Farnsworth's big oak desk. "We had a hell of a time tracing it. Even then it died just when we were getting close. Took three wrong trails before we found you. And another minute—"

Charles D. Farnsworth scratched a very sore new part in his hair. "Seems par for the course. We've always had problems tracking down our grad students out on Dodge County preserves. In fact, I recall you and Mary Ann Ott got lost for an entire night." Farnsworth raised an eyebrow at his student's reddening face. "Actually, I'm surprised the homing signal transmitted at all. Miss Czadakis tried her best to sabotage the entire radio apparatus."

The young man grew serious. "Well, it's a good thing she missed at sabotaging *you*. If the editor hadn't found the transmitter camera's last shot on that photojournalist's computer—if the cops hadn't ID'd her car in the Zoology lot—those other five guys we dredged out of the bog—" Jake cast a nervous eye on the rend tracing Farnsworth's skull. "You're one helluva lucky Brit, Charley."

"In this continuum, perhaps. Can't say that for my doppelganger, I'm afraid."

Jake leaned forward. "How it'd happen, Charley? Two existences at once—"

"I theorize one of her little 'Swiss cheese' blips occurred right here in this office, when she shot 'me' the first time—splitting me into two alternate astral planes of existence. And perhaps, unknowingly, herself as well."

"You mean *she* was experiencing a second reality at the same time *you* were?"

Nodding, Farnsworth pushed away shadowy memories of a *third* existence that seemed bittersweet and dreamlike and not entirely his alone. "Because she and I both had a foot in each of two dimensions, the fabric

of the continuum was overly strained. Rather than gently opening like a door to admit us in, like a boil it burst outwardly, spewing the Barsoom beasts here, with no way back."

Jake ran an admiring hand over the desk's newest specimen, a scimitar-curved, yard-long blueblack stinger, polished to a glossy luster except for a tight group of six .45 slug pits near its fractured base. "I'm surprised that bog wasn't brim full of astral-projected critters."

Farnsworth heaved a long sigh. "I'm not convinced the bog was the true site of that astral door. I suspect the phenomenon initially manifested there by sheer coincidence—perhaps Claudia had simply gone out for a little, ah, stargazing with her first victim—something occurred to send her into a murderous rage, the rift opened, and she assumed it was a permanent feature of the area. In actuality, however, Claudia herself was the focus for the opening rift."

"Claudia?"

"After a loud sound, such as a gunshot. Her Angel-Eye Syndrome is characterized by hearing peculiarities."

Jake chewed a lip, chasing a thought, then nodded toward Farnsworth's creased skull. "Charley, she shot right at the end, too. No astral blip happened."

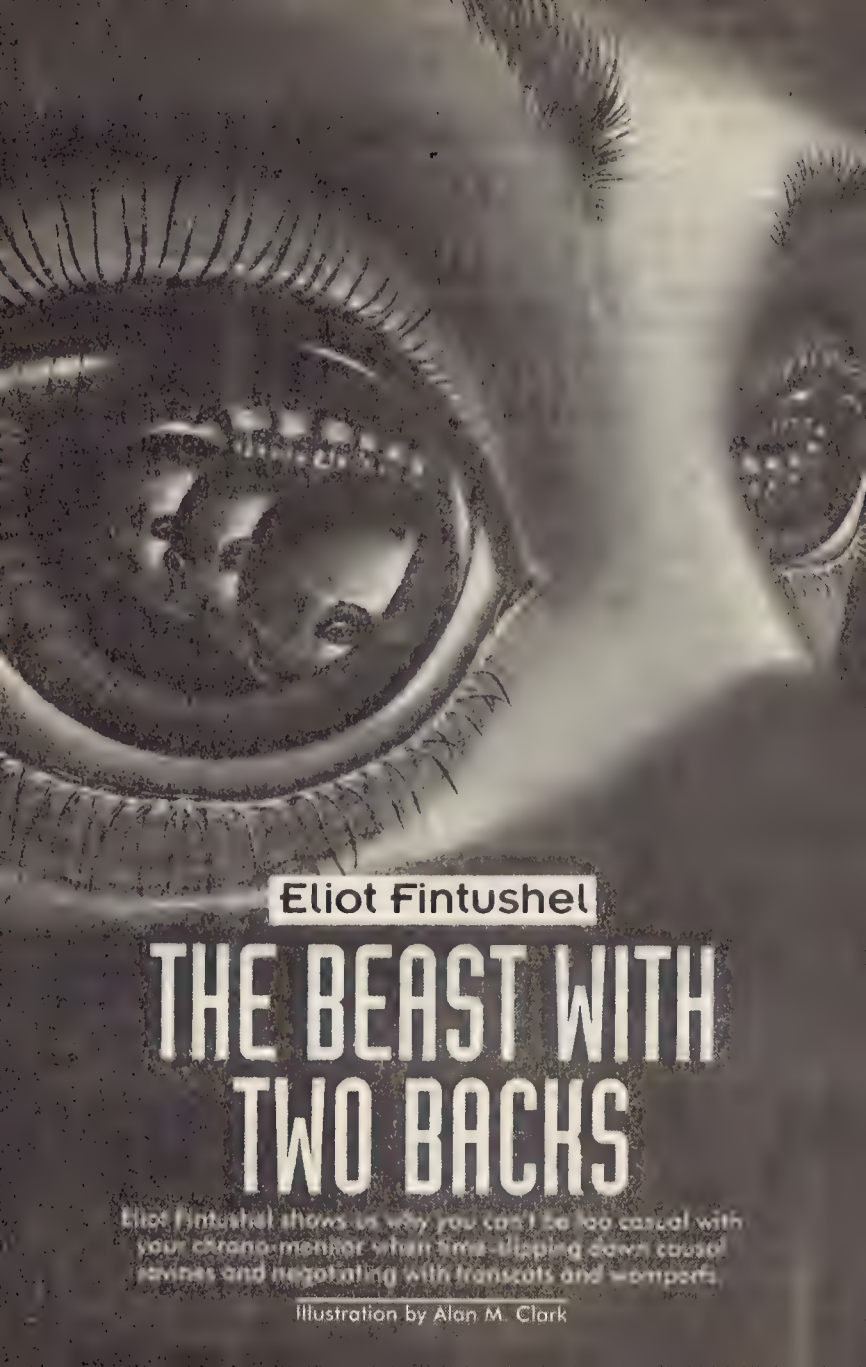
"That we are aware of. Who knows? We may be holding our pleasant conversation in any number of possible continuums—perhaps even one in which Claudia Czadakis is simply an Earthbound madwoman, and Siths and Banths are merely fictional creations. In any case, I am going to suggest that the medical community give Angel-Eye Syndrome a far closer examination. The only other confirmed astral plane traveler, Edgar Rice Burroughs, also had a white hair streak and mismatched eye color. One green and one pink, I recall." ●

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Eliot Fintushel

THE BEAST WITH TWO BACKS

Eliot Fintushel shows us why you can't be too casual with your chronomonitor when time-slipping down causal ravines and negotiating with transcats and womports.

Illustration by Alan M. Clark

seen about her in the holos—your typical homicide, open and shut. I don't know why I pursued the case. No phone calls. No retainer. My legs just took me there, I guess.

"Look," I says, "first off, you're pleading guilty, no arguments. That's the only way you're gonna get out of this with your blood above sea level. Say no to that and I'm out of here." You got to come on strong. That I know. First off, if you passed the bar by the back door, like I done, with Cerebral Data Insertions and a strong dose of *chutzpah*, they think you're some ambulance chaser, and they put on airs, even the moon scum. Second, I don't wear no cologne.

And third, chrono-cells make me grouchy. This dame is being held between 8:10 and 8:13 A.M., January 22, 2023, at the Beulah County clinker. She's been there for over a week now, stacked in that three-minute slot between a double-dip street walker and some Venusian swampland real estate grifter who is about to leave a stench so bad you can smell it clear back to 7:30.

She moves the kind of slow that comes from no breakfast—make that lunch and dinner too. She just fixes those blue-grey weepers on the time grates along the concrete floor and fingers her zirconium ID tag. "I'll do whatever you want, Mr. Arnby." I doubt that.

She sighs—something between *weltschmerz* and *nooky*. Then she looks up at the ceiling, mournful, lifting her chin away for a second, and I grab the necklace. "Let's have a feel of that tag."

She pulls away, yanking it out of my hand, but as soon as my thumb hits the zirconium, I know the whole sad story. I've got to hear her tell it though. "Okay," she says, for the twentieth time. . .

Rudy was down (she says, fingering that tag) real down, real gone. He was a wildcat during the first chrono-mining rush; he'd hit it big, and then he was always sore because he could never make it like that again. He was in his teens back then, a street kid in New New York, and it was so cheap to backdoor a time chasm, he was out there all the time, centuries backward and forward before he was sixteen.

You know how at that time there was a sleaze on every corner selling a ride into some sinkhole that had opened up in a basement wall, or a lost river that resurfaced in prehistory a jillion miles away. Well, Rudy was a big damn customer, and he always made it pay by coming up with little stitches that somebody or other would bankroll.

He liked to go down in an open hurry, no clocksuit, no policy. He'd been down so many times, there were cracks in the nose of his hurry, and we'd get this seepage, moments slipping in from the Civil War or the Pleistocene or some timeplace you never heard of, but you better be ready to fake it. Rudy would scoot down one of the causal ravines that

hadn't been fully charted—that's where the money is—shooting out time dye to trace the causal lines.

He'd hope for a clean one, one that didn't have many branches. Then he'd go in there and try to see some profit in it. Maybe a wee tug this way or that would give some fat cat down the line a smaller nose or a better investment portfolio. Usually not. But it only takes one good find to pay for a lot of dives. That's the hook.

Well, real early on, my Rudy found a big one. He used to crow about it in bed. "Picture this," he'd say, "I'm what? fourteen years old, a real jerk, a virgin, a hot shot from Krypton, rolling the suits for tough cash and dodging cops all night. I'm just caryning in the time shafts then, see? What do I care? If I get a draft of crowd smell from a London mob or a dinosaur fin dents the hurry, it's just a lark as far as I'm concerned. This pal of mine shows me what's supposed to be good. 'Look for a thread,' he says to me. He's got a pocket hypostat scanner he lifted off some citizen, see? He shines it on the wall down there, about six centuries back—that was deep then—and shows me those causal lines, like forks in cracked glass.

"Well, wouldn't you know it, right off, I see a clean, straight run, thin as an aphid's poop, all the way up to Time Present, honey, and not a jag off it. The lights go out. Hey, what's this? Pretty soon, I get the picture. My pal is trying to shove me out of the hurry and stake *my* claim.

"Well, he's dead, and I ain't. That little line ran straight into the election of '048, and there's a lot of meat-eaters willing to pay me the big bucks to keep things the way they were, and a lot of them thinking they'd like to *change* it. When the bidding was over, I was fifteen years old, and I owned one of the moons of Jupiter."

"What an asshole!" I says. I don't wear no cologne. "So he buys a moon, and then he goes broke trying to develop it."

"That's the story," she says.

"I knew a lot of guys like that. But what about the time cops . . . what do you call 'em?"

"Monitors. Chrono-monitors. Sure. That's the whole thing, Mr. Arnby. But they didn't have them back then. That only came later, after Mercury."

"Sure. Right. They wouldn't have needed them so much before that anomaly business."

"The Second Orbital Anomaly. I was in college then."

"You went to actual college?" Suddenly, I hated her guts.

"Yeah. There was still a little rock-and-roll money in my family from my great great grandmother. I was in college when the news came, so I got all sides of it. Einstein was wrong—it was a big deal. Who'd have

guessed that an aberration in the orbit of Mercury was really some nerve cell in a creature living two million years ago mostly on Betelgeuse?"

"This stuff I do not follow real well."

"Nobody does. That's how come they've got the monitors," —She almost looks up at me then, but quashes it with a soap-opera sigh—"*and even they make mistakes.*" She sighs again.

"The Anomaly got tagged by some temp drifter, ex-astronomer gone on the bum—Actually, Rudy knew the guy, he used to drink wood alcohol strained through stale bread. This drifter caught the connection between the spike in Mercury's orbit and some jazz that stuck to his hurry when he caromed off a galactic-formation-period timewall, way down in; he saw that those two things were parts of the same buzzard.

"Once you knew what to look for, they were everywhere. You never knew if the gum you were chewing was an alien critter's spinal fluid or a vagrant wish in some future trouper's daydream. The monitors could tell though. That was their business."

"*Most* of the time, you mean. They could tell most of the time."

"Yeah. Most of the time. Even *they* had to ID you sometimes . . . and there were slip-ups."

"That's the story, isn't it?"

She starts to cry, then catches it and bites her lip. She never looks up. The seconds and minutes we've been spending together have already recycled and are steaming back in through the time grates. There are little echoes eddying up from the floor, 4-D echoes, and you have to concentrate to hold your Now. Like I said, chrono-cells make me grouchy. Also, I am getting a tic in my leg, and I am not the kind of guy who likes to tap dance.

"Yeah, Mr. Arnby, that's where the story is."

"You tell me."

Rudy never wore ID down there (she went on). Oh, he had it. You had to have it to go down, especially if you'd surfaced with a big salable like Rudy'd done, but he wouldn't wear it. He was a real man, Mr. Arnby. He'd wear it everywhere outside the mines, because he was that proud of being a chrono-miner, and it would give him an excuse to brag about his moon. But down in the time tubes, forget it! Because you *had* to. Rudy took orders from nobody.

He'd get mad at me for holding onto my tag the way I did . . . do. It's like seat belts on a slowship, the way I see it. It's just common sense. But no, not for Rudy.

You can't imagine how much I loved him, Mr. Arnby. I get the shivers just thinking about the hair between his pecs where the tag would dangle when he wore it to a party or something. Do you think I'm being bad?

The first time I met him face-to-face—he crashed a frat party at my college—I stuttered and drooled. I mean it. I'm not ashamed of how I loved Rudy. He took me down in his hurry to the beginning of the proto-galaxy, and we made love before the stars were there.

But he was already in trouble then. He was hocked up to his ears. That moon of his had mortgages on its mortgages, and Interplan was on his tail for some messy tinkering in the nineteenth century, trying to deposit small amounts for the big compound interest and so on—the old, dumb scams.

"Come on," he says. "I got this big thing going. One more and I'm home free. This is my last jaunt," he says. "I got a jillion-dollar line scoped out, but it's in deep, and I gotta have somebody who can document but good, or them two-bit spoilers'll be all over my ass." So what do you think I said?

Pretty stupid, huh? He wanted to go back before *molecules*. He said he'd seen a straight hair with no runoffs, a causal line pouring straight into some Rockefeller's hip pocket. The kind of yarn you hear from chasm vets in the drying wards, but I swallowed it. When he revved up the hurry and pluperfed into the sinkhole, he pushed his tag into the palm of my hand, like always. And this time he said, "Toss it. This is my last run." I threw it into the stream and watched it bob forward into God knows what redshift a jillion years from now. Then he said, "Yours too."

"But that, you wouldn't do."

"Look at me, Mr. Arnby." She isn't looking at *me*. "I've got two arms, two legs, a head, a belly . . ." Et cetera . . . "Do I look like a transcat to you?"

"A transcategorical? No, ma'am. You ain't that."

"To you I'm not. But a womporf might take me for three or four nations, and try to negotiate separately with each one. Or he might think my childhood was some goo in his hair and scrape it to shreds with a flea comb—and where would that leave *me*? There are a lot of womporfs down in the holes, and some of them are monitors. And womporfs aren't the wildest by a long shot—their lives don't bounce back and forth across Minkowski space like a dookil's or a froob's." She pauses.

"Look, to *us*, womporfs and dookils are transcats. To *them*, that's what *we* are. There's no absolute in the holes. That's why they set up ID tags—so that a monitor will know where you start and stop, and what to look for when they're looking for you."

"Very sensible."

"What's that supposed to mean?"

It always comes to this. Maybe it's a lapse in my moral training. I was a street kid too, you know. My clients always reach a point where they

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think I'm on somebody else's side. They start to get bilious. Maybe I *should* wear cologne.

"Why do I get the feeling, Mr. Arnby, that you already know all about chrono-mines and ID tags? Why do I get the feeling that you already know a lot of things?"

"Forget it," I says. "It's my job to be a wise-ass. You'll be grateful for it when we go to trial. So you toss Rudy's tag, but you hold onto yours, am I right?"

"You're dead right, Arnby."

"Dead right—real good. So why don't you give me the falling action?"

"Nobody goes back past molecular," she goes on, "not even nowadays, not even the R & D boys in the big cartels. Too damn risky. The farther back you go, the narrower the squeeze. You know what an event horizon is, Mr. Arnby? It's what makes timeshipping possible. You flow down the spacetime between events that are too far apart to affect one another; that's what the causal ravines are. But the farther back you go, the harder it is to maneuver without getting mixed up in some causal sequence. Suddenly, you're knocked out of the stands and you're running bases. Your Now is compromised. Your hurry's a vapor. You're a jillion years from home, and nobody knows your name.

"Rudy piled down into hot particles, whooping like a kid on a roller coaster. I begged him to slow down, honest, Mr. Arnby! But I saw the line he was talking about. It was like a thread of pure gold in a vacuum sheath; there were a couple of events running off it here and there, but they all pinched out after a couple of thousand years and none was more than half a light-year in influence."

"Of course, that don't interest you anyways, am I right?"

"What?"

"College girl. Hereditary wealth. You're along for the ride, not the dough, *nessy pahz*?"

"*Oui, c'est ça*. I loved Rudy, Mr. Arnby."

"Right." I have to massage my leg, it wants to jump that bad. Maybe a sliver of the double-dipper ho in the previous minute is tormenting my kneecap, I figure. The timewalls in them cribs are not from Krypton.

"It was no wonder nobody had logged that causal line. It was fairly branchless, but it was gnarled and deep. To get decent hypostats, we had to spin and weave at next-to-impossible angles, but it was the only way to stake a credible claim."

"Your department."

"Yes, Mr. Arnby, my department."

"Rudy was just a street kid, right?"

"That's right."

"Did I mention, I was a street kid too?"

"I think you did."

"Sorry. Go on. You're in hot particles. You're statting the line. What's next?"

She starts to cry. I am not partial to this kind of action. I am not your type that's quick on the hanky. I tend to sit back and wait till the rain stops. Pitter patter.

"We hit something."

"What? What did you hit?"

"Something! I don't know! Suddenly we were everywhere at once. I was screaming. I mean now, I mean this century, I'm screaming, but my eyes are smeared all over the hot post-Bang with nothing but hydrogen and helium and shakes."

"Shakes?"

"Some kind of trembling. It's hard to describe."

"Try."

"No. Rudy's gone. I'm gone."

"An accident."

"Yes, of course! An accident!" She is shrieking and sobbing, getting hysterical. I feel this is inappropriate.

"But you're lucky. A monitor cruises by."

"What? Lucky? I see the monitor approaching. I see his time shielding, so bright against the black vacuum, I feel it searing into my mind as if it were my own body. His clocksuit is swelling toward me, the tag beams rotating, scanning . . . then I see Rudy. He's lost an arm. It's spinning next to his hip like a bloody pinwheel. He's just floating through the chasm, holding onto a fragment of the hurry's chassis. But he's got no tag! The monitor doesn't know what's in front of him."

"Except for you, am I right?"

"Yes, damn it, except for me."

"Because you've got your ID tag."

"What are you, some kind of idiot? Or do you just like to make people suffer?"

"Why don't you just tell your story?"

"Yes, why don't I? The monitor doesn't even know there's a sentient being there. He plows into Rudy's legs and takes them both off at a swipe. I'm shouting, 'Stop it! Can't you see him? That's his arm, his jaw, his eyes, his memory, his love for me . . .!' Too late. All gone. Rudy's *gone*."

"But not you."

"What the hell do you want, anyway?"

"For starters, lady, you can look me in the eye. Gimme at least that little courtesy."

But she won't. It's starting to stink in there. The Venusian guy in the next minute is starting to leak back into our time slot. I figure it's the

guards' way of letting you know your visit time is coming to a close. She's licking tears off her lip, but she's snarling too. She doesn't seem to appreciate my social style.

"That's not your ID," I says.

"What?"

"I knew Rudy. I didn't know I knew him till you gave me a feel of that tag—*his* tag. Yeah, I been down there, honey. You was right. I was stringing you along. I know all about the timeshaft racket. I was the guy that taught Rudy everything. I was the guy he thought he'd offed in the mines, only it wasn't *me* turned out the lights; it was Rudy. He bounced me out of that hurry into a nineteenth century bordello, honey. And I got three separate doses of VD before I found my way back, hitching a ride on some lonesome prospector's clockship.

"Hey, I give him his moon. Who cares? It's only money. I'd rather have a profession, you understand? Like what I got here. I ain't vengeful. But *you*. You take the cake. You done to him what he done to me, and here I am to call you on it."

"You're supposed to defend me."

"I *will* defend you, lady. I'm gonna keep your ass off the chopping block too, because I'm good at this. I'm real good. Now talk."

"I loved him, Mr. Arnby. I loved Rudy."

"Don't give me that crap. You took his goddamned tag off him and *left* him out there to get mauled to quarks. How the hell long did you think you could fool people? Why did you hold onto that thing?"

"It's mine."

"Get off that bullshit or we're quits."

"I'm telling you, the tag is mine."

"I know that tag is Rudy's."

"Who said it wasn't?"

"Huh?"

Then, for the first time, she looks up at me—with Rudy's eyes. She commences to talk at me, but her mouth ain't moving. I feel like I'm remembering what she says from a couple of minutes ago, which she didn't. I feel like she is shaking my bones and pumping my blood. I feel all kind of things I do not particularly care to talk about. "We're the beast with two backs, Mr. Arnby."

"A fuggin transcat!"

"Rudy is my other half."

"Was, you mean."

"No! Don't say that! We can heal. I'm sure of it."

"Sure you can baby. You can heal." At this point, the willies is making a summer home in my spine. I am looking for any way out.

"I've just got to stay very still, very quiet, for a long time."

"We'll get you a life sentence. No sweat. It'll be just like this all the time."

"There's more."

"Huh?" The methane boy, the Venusian grift artist confined in the same cell, next minute, is stinking through real bad now.

"Smell that? That's my brain stem, Mr. Arnby."

"The Venusian?"

"No, only his smell."

"You gonna retain me to represent him? I'll make sure you get adjoining cells at the longterm."

"That's not all, Mr. Arnby."

"What?" My leg starts bouncing so bad, my knee is beating against my forehead. And now I am reciting poetry, me that only knows old rock lyrics and lavatory rhymes. I am doing Blake and Andrew Marvell and guys I never heard of except for some fill-in-the-blanks on the Equivalency preps. All of a sudden, it stops.

"You."

"Me what? What the hell was that?"

"You're in this too, Mr. Arnby." I don't say a word. "You're a part of my tail."

"Look, it's been a long day." I start to call the guard. The Venusian is practically visible now, walking through my skin, chewing my gum, shuffling my feet. I am feeling extremely grouchy.

"I'll let you go now. I didn't mean for you to know, Mr. Arnby. It makes things difficult, doesn't it? But you'll be back soon."

"I will?"

"Yes, very soon."

This is not my favorite case, let me make that clear. You can bet I'll get that dame exactly what she wants—I keep coming back to her, and it's not like I have a lot to say about it. My legs just kind of take me there. Bit by bit—says she—Rudy's growing back. What the hell! We have what you might call a working relationship. And don't you put on no airs, Buster, because who knows whose hiney *you* might turn out to be? ●

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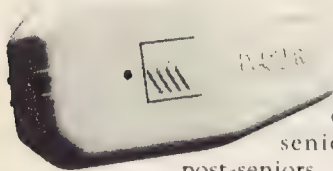


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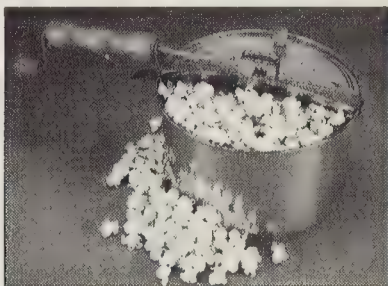
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Steve Martinez

ONE HAND CLAPPING

The author, who has a BA in philosophy and a BS in math (with a minor in physics), was born in Albuquerque, NM, and has lived there for almost all of his life. His marvelous space-time dimension-twisting tale of "One Hand Clapping" is his first story for Asimov's.

Illustration by Mike Aspengren



The sun was low enough in the sky that it seemed to squat, fatter than the sun of Earth, and dull, like molten iron. The unfinished girders that would someday be an array of radio dishes cast long shadows into the sky as well as on the ground. A haze of tiny insects was passing over the site like a fog—harmless, but it made Owen and the other human workers put on their face masks.

The robots didn't mind. They were oblivious to the hazards of the place, as well as to its beauty. They had no idea of its purpose, either. The human colony on Stukhir wanted to contact another human presence, or make their existence known. The Nmeri knew their location, of course, but they weren't human, and their asking price for data on other human outposts was too high.

It was time to go home now, but Owen pretended to be fiddling with a robotic fork lift as he waited for some stragglers to clear away from the Nmeri seer. Three construction workers in hard hats had built a fire upwind of the creature. The smoke and rising currents helped keep the bugs off it. Sometimes the aliens, at least the ones the colonists had access to, seemed almost helplessly primitive despite their hundred-million years of strange and deep technology.

It wasn't clear whether the seers were a subspecies of some kind designed simply to eavesdrop, or whether they were just eccentric individuals. This one was fairly typical. It might as well have been an exotic plant for all the life it showed. Its head was like a giant broccoli sprout, with eyes looking in all directions. Spread out like roots were half a dozen three-jointed limbs that could be used as arms or legs interchangeably, though it hardly ever moved from the spot and lived like a beggar among the workers, clothed in mere ribbons, accepting their charity of food and water.

Still, the creature's presence was at least a sign of *interest* from the aliens who shared the planet with them. It added a little spice to coming to work. Seers weren't all that rare in the human quarter, though, in Owen's experience, they usually weren't so accessible.

When the others moved off, Owen approached the spot where the alien sat in the flickering firelight. He hooked his translator over his ear and threaded the mike into his facemask. The seer greeted him with the rapid clicking of a pidgin version of their language.

Owen sat on the ground and spoke to a set of eyes that took turns looking at him. "I finally got my way," he said, "but I don't feel good about it. I wonder if I should call the whole thing off?"

The seer made a buzz that was not translated, then, "This appears to be the pattern of your life. What you say now is a reformulation of what you have said before."

"The difference is, there's nothing to *stop* me now. Leya still hates the

idea of having a seer in our house for twenty-one days, but she gave in. She signed the consent form anyway, but she refuses to come with me. And my exemption for Tyler was denied because he's too young to leave the compound. So that means I'd be going alone."

"Perhaps one of your coworkers. . . ."

"No, that's not the point. I feel as if I'm making her do something she despises, just so I can go have a good time."

"And how does your other mind reply to that?"

"Well, she's being selfish, too. She doesn't know what this means to me. She doesn't *want* to know."

"Have you tried reasoning with her?"

"Yeah. It doesn't do any good. I wish I could get her to talk to you."

"The granting of this wish is facilitated by the terms of our contract."

"Yeah, I know." Owen smiled at the way the seer took things.

"And she has signed the contract," added the seer, as if spelling it out to a child.

"Yes, but that's not what I'm getting at." There was probably no way to make an alien understand. Not even this one. Usually the Seers were so aloof they might as well have been fire hydrants.

And this one had not seemed any different. It ignored workers who gave it a hard time, and hardly seemed to notice when they played jokes on it. Ernest questions it answered cryptically, often in riddles that seemed nonsensical and may have been an alien form of humor.

But when Owen could get it alone, for some reason it seemed to take an interest in him. And the mere fact of that interest made Owen feel chosen. Unfortunately, he had no idea what he was supposed to *do* about it, and often ended up talking about mundane things he hadn't meant to bring up at all.

"I wish you could talk to her before I go. Maybe you could get her to come along."

"If she comes to me, I will talk to her."

Owen threw up his hands. "You just don't get it! After all that's been done to us, you don't realize *why* my people despise you."

"Perhaps it is the one who despises who does not understand."

"You can't keep people in a zoo, no matter how well-tended. It's not in our nature to accept that."

"The means to leave are at your disposal."

"Yeah, right." Owen shook his head in disgust, though what the alien said was true enough in a literal sense. For a drop of blood, a human being could buy passage through hyperspace to other worlds. But such a deal was not only illegal, it was considered a crime against humanity on the order of trading in slaves. It was also how the human population of Stukhir had come to be. They were the cloned descendants of people

who had long ago traded their blood for Nmeri wonders, with full knowledge and consent that the blood would be used for cloning. The colonists would never do to others what had been done to them. And for many of them, even striking the kind of deals that were allowed by law carried the same stigma of appeasing their masters.

"My problem," said Owen, his anger flaring, "is just a little piece of the same damn thing you did to all of us here on a larger scale. You make the price just a little too high, and then you're so God damn *stubborn* about it! Why did you have to make coming into my house part of the deal? Why couldn't you leave my family out of it?"

"Keep in mind that none of you would *exist* but for our bargains with your ancestors. In return for your existence, and the comforts we provide, each of you may select what role you wish to play in our experiment. There are reasons for our conditions that cannot be revealed to you."

"What it boils down to is, either you don't know what you're doing to us, or you don't *care*. What you've done to *me*. The way I've been . . ."

He couldn't bring himself to describe what was really on his mind. He'd behaved badly, like a child throwing tantrums, holding grudges, trading barbs, blowing up over trifles. How could she love him and be so stubborn and disdainful? How could his own love evaporate into hate? In the end, she had given in because of what it was doing to their son. Now that he had his way, he felt ashamed instead of happy. What he really wanted from the seer was to be told it was all for the sake of something *important*.

"This shaman, is he really any good?"

"Ghurka is the best of his kind ever to visit this planet. His roots are as ancient as the ritual he performs, which is rendered in illusions that only modern technology can create." Then, as if sensing that Owen was drifting away, he added, "If you do not go, you will always wonder what might have been."

That was an unbearable thought for Owen. Maybe there was still hope. Maybe with the seer living among them, she might fall under his spell, and she would be full of questions they could all explore together.

That night, Owen hardly noticed that he was the last passenger in the bus that carried him through the compound. He was lost in thought as the driverless vehicle rolled along. The bus slowed to a stop, and a robotic voice announced that they were at the checkpoint. As Owen stepped onto the curb, the bus moved sideways, then took off backward down the road. Here, in the outskirts of the human quarter, the night was dark and clear, with no streetlights to get in the way. Only one of the planet's three tiny moons was up—a bright chip of a moon too faint by itself to fog

out the ghostly filaments of a nearby supernova remnant that occupied a good fistful of the northwestern sky.

The only building for miles was the low bunker of the checkpoint, with its slit-eyed tower overlooking the moat. He followed a sign to the customs area and passed from one automated receptionist to another. Though the faces in the screens looked human, he had to phrase all his answers with that certain clarity that artificial intelligence requires. The only other humans in the place were an armed guard, and a few people in the lobby, who looked like students on a field trip.

Owen meant to ask them where they were going, but he was soon bogged down in procedures. He was scanned for weapons and recording devices. He had to read the terms of his contract out loud and verify his consent. He had to sign waivers of liability and a statement warning him of the dangers. He had to pass a face recognition test consisting of people who had disappeared, so that in case he saw any of them he could try to make contact, and report the sighting to the authorities. He swore an oath not to deal in forbidden resources.

Then he went outside, down a sandy embankment to the edge of the moat. Instead of water, the surface was a black, glassy substance that the aliens referred to as the substrate. Owen stepped out on it and took a few steps, but the substrate brought him gently back to the shore.

It was almost time, but there was no one in sight to meet him. Off in the distance, reflected in the moat, he could see glowing clouds and a slow-moving, aurora-like curtain of phosphorescent insects winding their way down. Very pretty, though sad, in a way, to think that bugs were the only indigenous life form, after two billion years. How could evolution get so stuck?

He stepped out on the moat again, and this time the substrate carried him quickly away. He fell backward, and was caught by a protrusion of substrate material that had sprung up and formed into a seat. There was no one else in sight. As he accelerated, with the wind beginning to sting his face, he descended into the substrate and continued his ride in a subsurface bubble, lit by a pale blue light that cast no shadows. It didn't help his mood to feel as if he were being abducted.

Soon he popped up in a small, bowl-shaped arena, a mere dent in the substrate. There were fewer than twenty other spectators. As far as he could tell he was the only human, though it was so dark he could hardly see. It got darker as the arena closed itself over their heads, leaving only a twelve foot hole for stars to shine through. At the bottom of the arena was another pool of stars, reflected in a mirror.

As his eyes adjusted to the dimness, he realized that all the other spectators were children. He could tell because they had smaller heads

and fewer limbs. They still looked like broccoli. They sat spiderlike, with their knees arching high.

A four-limbed child drew up to him, surfing the substrate like a pro, and said, "He is waiting for someone to volunteer."

Owen was puzzled, then looked down and saw the shaman now sitting on his reflection at one focus of the elliptical mirror; the shaman was a magnificent specimen, with a huge head and at least a dozen limbs.

The child seemed to be waiting for an answer, then said, "Since you are a guest on this planet, we defer. Do you wish to volunteer?"

"Volunteer for what?"

"To participate."

"All right."

The child moved off, and then the show began. One by one, turning on orbits like a carnival ride, the shaman's arms dipped into the mirror and pulled out drumsticks tipped with balls that glowed like blue fire. Then, softly at first, he began drumming on the surface of the mirror.

As the rhythm began to multiply, the "torches" began blinking in rhythms of their own, tracing patterns through the air like meteors. Soon there were more drumsticks in the air than arms to hold them. The shaman was a juggler as well as a drummer.

And a magician as well. Some of the torches sank into the mirror, and others shot out from it to rebound off invisible walls. The layers of drumming began to trigger Owen's translator—just fragments, a word or phrase here and there, nothing that made sense, but enough to clue him that the drums were speaking.

Perhaps the flashing of the sticks was a parallel communication as well, for the aliens also spoke by flashing their eyes in a language so far undeciphered by humans. The audience seemed to be flashing their eyes in response, or perhaps their eyes were just reflecting the lightning flashing down all around them.

Owen's translator could not keep up, so he shut it off and let the drumming enter his head uninterpreted. Gurkha's arms moved like the pistons of a machine having a seizure, shooting off sparks, yet molding them. Whole cities seemed to rise and fall and interpenetrate each other, rushing out into the dome, and falling back in on the shaman from all sides, the whole commotion somehow echoed in the medium of sound.

The effect, though exhilarating at first, soon overwhelmed him. After a while, the whole spectacle was drowned out by a sense of regret that he hadn't found a way to bring his family along. In the midst of it all, he couldn't keep his mind off the mistakes he'd made. But wasn't it possible that the aliens weren't being purely selfish in bringing people here? Might they not have something to reveal to those who wanted it?

A jarring drumbeat right next to his head snapped him out of his

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distraction. Then the torches leaped away, and joined the fountain of lights that was bursting out of the mirror and falling into it. The whole display was turning on many axes, the arena itself was moving. All the spectators were sliding up and down the walls. Owen felt as if he were being tossed about by waves. The focus of sound whisked around, and he was being hurled after it, right up the walls, upside down and over the dome and around again.

He had no control over his little piece of substrate, and he couldn't hold on. He slid up, and over, and was falling free!

Heading straight for the mirror, he caught a glimpse of himself flailing just before he struck—but instead of shattering the glass, he passed through it. He was falling *into* the mirror image, or rather, as if he had become his own reflection, moving backward in time, he was rising *up* through a shower of sparks into the circle of stars at the top of the dome.

But that couldn't be right. It didn't make sense. He had a sense of falling *down*, but his eyes told him he was rising, and when he looked down at his reflection, he seemed to change places with it—his sense of time bounced back and repeated his plunge into the mirror. This happened over and over, each time giving rise to a state of mind less surprised than the previous one, fear and futility slowly giving way to a deep acceptance steeped in *déjà vu*. All the vicious cycles that had composed his life seemed to dim away with every oscillation as he approached a state of encompassing the beginning and the end in a single moment.

He lost track of how many times he went through the mirror, and when he rose backward from the mirror for the last time to be caught gently by a ripple of substrate, he didn't want it to be over yet, at least not till *he* was finished.

As he slid around the arena like a marble in a bowl, among the alien children, he wondered what it had meant to them. Gradually, the drumming died down, the juggler caught his torches and disappeared, the mirror sank into the substrate, the dome opened, and the arena flattened out and grew still.

But the children kept moving. They sang like crickets with their whirring, clicking voices, and danced what Owen recognized as a vestige of their ancient courting ritual—though they didn't mate in the usual sense: instead, they chose partners, then took themselves apart, brains and all, and recombined in cocoons.

He felt out of place among them, and took the opportunity to steal away. If he could just make some distance before he was noticed, he might be able to take a walk through the alien city instead of being whisked away under it. He took his bearings by the stars, and made it to a street that wound through what seemed like the roots of giant trees.

In reality, the roots held other layers of the city. The buildings were

on palettes on many levels. The architecture was fantastic, shell-like and delicate, with broad windows and blue interior lights, far freer than the human compound despite the shared technique of growing buildings into patterns from a layer of substrate. There were also gardens full of flowers with gossamer membranes that billowed in the air to catch bugs. He was the only one who was traveling by walking, by moving his feet. Everyone else seemed to glide.

Except for two children who came dancing up to him, then danced around him.

"You are the Earthling who witnessed the shaman?" said one.

"Yes."

"I, too, was there!" The child gave his name, setting off a meaningless burst of syllables in Owen's translator, which he shortened to "Repo."

"Now make a word for me," said the other, which he did, assigning the name "Kali" to the Nmeri word.

The creatures were walking in front of him, and although they faced in *any* direction as much as they did toward him, he couldn't shake the impression they were walking backward.

"What is it like to be human?" asked Repo.

"I know," said his friend. "It is like being a globe of darkness, with one tiny hole at one end through which not enough light can get in. Am I correct?"

"Two holes," Owen replied.

"But they both point in the same direction," said Kali as he scurried around behind Owen. "Look, he cannot see me here."

"Pay no attention to Kali," said Repo. "He is . . . what would be the word. . . ?"

"I think I know the word," said Owen.

"Why are you here?"

"I came to see the shaman."

"Why *you*?"

"Because I was willing to pay the price."

"What price?"

"For twenty-one days, a seer will follow me everywhere and watch everything I do."

"What will you do for twenty-one days to compare to what you have seen?"

"Just be myself, I suppose."

"You got a bargain," said a voice behind his back.

"It doesn't make much sense to me, either," said Owen. "Why do you do it? We don't really have anything you need. Why do you make us go through hell for knowledge you should give us freely? We wouldn't do that to you."

"But what will you do when the universe is understood, in principle, completely, as it is to our . . . what is the word?"

"Supercomputers," said Kali.

"That is not equivalent."

"They have no equivalent concept."

"Supercomputers, then. But your computers are not truly sentient, nor do they permit direct interface, mind-to-mind. Just as being human does not fit into the brain of an insect, there is certain knowledge that does not fit into your present stage of existence."

"Don't tell him more than he needs to know," said Kali.

Repo whirled around to face Owen with a new set of eyes. "Do you need to know?"

"Yes. Go on."

"I am giving you the reason we make a game of knowledge. Because if I simply wanted to *know*, I could interface with a supercomputer, and our combined identity would access the knowledge. But I would be a tiny, negligible part of the access. True, I would be positioned at the frontier of research, able to simulate virtually any process in the universe, or model other universes, but I would not be *me* any more, do you see?"

"You'd be such a tiny part."

"Yes. You could say that we evolved an intelligence that made us obsolete, so instead of becoming extinct, we found a way to *continue* the game, to recapitulate the process of evolution that gave rise to us, and went beyond us."

"The way you recombine into . . . into recombined individuals?"

Somehow, Owen caught a sense of exasperation in the clatter of Kali's voice. "All he wanted to know is why we don't give away the secret of hyperdrive, or whatever it is they want from us. Just tell him that there are things humans are not ready for. Remind him what humans are known to *do* with power."

"He needs to know why it is important to us. He deserves to know, in exchange for what we are going to ask of him."

Owen stopped in his tracks as Repo continued. "It is by recombination that we make the transition to higher forms personal. It is not unlike the way you mate to recombine gametes, which we do in vitro. The key to our game is to acquire knowledge worth a merging of personalities to obtain."

Owen craned his neck at the stars, and saw that he was heading in the wrong direction. He corrected his course as the aliens scurried to keep up with him. "You have a reason for telling me this."

"The shaman has knowledge we want, but his price is too high. However, if we could deliver to him a cooperative alien, he might be willing to teach us."

"What would he want with me?"

Kali muttered to his companion, just slowly enough for Owen to catch, a phrase that roughly translated as "What would a taxidermist want with your grandma?"

"Slit your throat," snapped Repo, and, to Owen, he continued, "He would do nothing without your consent. There is a connoisseur's market for data on human idiosyncracies, much of which can be extracted harmlessly. Of course, you would be paid."

"Tell him the truth," said Kali.

Owen looked quizzically at Kali, then at his surroundings and up at the stars again. "You're turning the ground around under my feet, aren't you?"

"Yes," said Repo. "Would you rather go home? Don't you want to find out where we're taking you?"

"But tell him the truth," Kali insisted.

Owen pointed at one of Kali's eyes, close enough to make it blink. "Why don't *you* tell me?"

"The truth is, to get what we want will likely cost you more than a few harmlessly extracted idiosyncracies. You may be asked to deal in material proscribed by your laws."

"No, thanks. I'm in enough trouble already."

"There is another way," said Repo. "You could deal with us instead. Our price is not so high."

"What do you have that I would want?"

The words were hardly out of his mouth when the street opened up and swallowed them in a bubble that dropped like a fast elevator. When it came to a stop, and his eyes adjusted to the faint violet glow of the walls, he could see himself and his alien friends reflected in the shaman's mirror. They seemed to be waiting for his reaction. Now that they were still and quiet, they seemed to have turned inward, for a moment, into thoughts without human translation—or maybe it was just the way the light shimmered in their eyes like blue flames.

"Is this the same mirror?"

"Yes."

"What's it doing here?" He went up to it and was going to touch it, but something in the way it shimmered, like a soap bubble, caused him to run his hand along the cool metal frame instead.

"It's on its way to the next user in the queue. We have merely slowed it down a little."

"It moves slowly through the substrate, anyway," added Kali. "It is much more massive than it appears."

"What do you mean? It goes from one shaman to another? Who owns it then?"

"Ghurka owns it. It is his claim to legitimacy."

"What exactly is this thing?"

"It is surely a component of a larger device, a starship, perhaps, or some related experiment with access to hyperspace. We believe it contains a naked singularity."

"A defective component, most likely," added Kali, "or else what would a dead branch like *Ghurka* be doing with it?"

"A dead branch?"

"In the merging of minds that comprises him he is ancient, but largely obsolete. Even as a historical relic, there are better sources."

"Oh, I see. A dead end."

"A dead end. Yes. With nothing to offer, he is unable to trade up into higher levels of being. He wanders around with his show, a relic from the past, of interest mainly to children."

"He preys on children, in fact," added Kali. "He tries to tempt us with his tricks, but who'd want to merge with a creature like that?"

"Sounds hopeless," said Owen. "He's a dead end because nobody wants to merge with him, and nobody wants to merge with him because he's a dead end."

"You begin to see how important it is to merge wisely. Many of his eyes were children once, excited by the spectacle and his power to bring to life voices of an ancient past, but within such a mind they wither down to servomechanisms. To coordinate such a display and make it speak requires many small minds squeezed down to narrow tasks and held to them relentlessly."

"You want what he knows without paying the price. You want to steal the mirror."

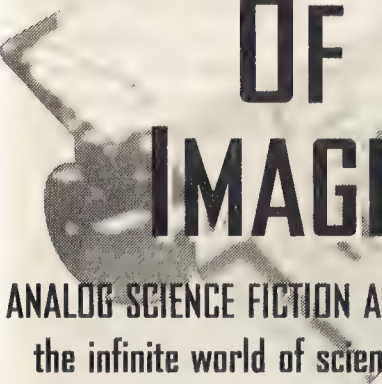
"No. We want to *understand* it. Do you know what a naked singularity is? Do you know what it implies?"

"Sure. Sort of. It's the point at the center of a black hole where everything is infinitely squashed and all the laws of nature break down. Something like that, right? Except, if you had one of those here, it would have sucked us up by now, wouldn't it?"

"Exposing the singularity implies that the gravity well which once hid it is dissolved. There would be no gravity. Also, this one is more likely a ring than a point, set spinning on its round axis like a smoke ring."

"Don't tell him more than his mind can absorb," said Kali. "He only *has* one mind, and can only think of one thing at a time. What the mirror is, is beyond his technical understanding. What it *implies* is beyond his imagination."

"As for what it implies," continued Repo, ignoring the interruption, "consider the universe. It emerged from a point, did it not? So you believe. That point was a naked singularity. A breakdown of laws, yes, but also



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a source of *new* laws. Kali likes to pretend he is much wiser than you, but in truth we are mere children. A deep understanding of such things is not given to us freely."

"So you've decided to steal what you're not wise enough to have."

"A *piece* is all we need. Not enough to make us dangerous. Just enough to let us barter with those who have the rest of the pieces. The pieces will be put together at the same time our minds are merged into a more comprehensive, therefore more benevolent, being."

This view of life, spoken so seriously by a child with eyes blinking at random all around his head, had a certain charm for Owen. They were like young virgins trying to put together a dowry, or birds decorating their nests with bottlecaps and flowers to attract a mate. At the same time, he could imagine how serious it was to them. Was it really true that the more lifetimes you absorbed, the more benevolent you became?

"Why are you telling me this?"

"We need your help."

"My help? How could I possibly help you?"

"Look inside the mirror. Not at the reflection—focus your eyes to the interior."

As he turned to look, the lights shifted, and his shadow fell across the mirror. At first he saw nothing, and then he saw something tiny floating in it, like a little clump of bubbles, barely drifting. When his eyes finally managed to focus on it, he recognized it as the distant image of his own body. It was surely an image captured when he fell through the mirror, though he hadn't realized he'd been so relaxed—the figure in the mirror dangled in that dormant, fetal way people have when they fall asleep in free fall.

"I see it now. What is it, a hologram?"

"It is more than a visual image. It is a self-enclosed resonance of your entire wave function. It is a living moment, endlessly re-experiencing everything you felt at the moment it was captured."

The child's words didn't sink in right away. "What I remember is bouncing around on that mirror a couple dozen times, maybe, but . . ."

"You fell into the mirror once, then emerged."

"But I remember going in and out many times!"

"Your consciousness oscillated within a segment of your world-line. It can happen. In fact, it *is* happening, to the part of you that remains in the mirror."

Owen looked back into the mirror. He wanted to deny such a thing could happen, but he remembered how it had been. At least Repo's explanation was as strange as what he had felt at the time. Still, to be stuck in the same moment, forever . . .

"That's hideous." He struck at the mirror angrily, and almost fell into

it again when his hand met no resistance and vanished into its own reflection.

Repo steadied him and yanked his arm out. "Careful, it still resonates to your pattern. But notice." He struck the very spot where Owen's hand had gone through, and this time the mirror rang solidly like a gong. "It is opaque to *us*. But *you* have access to the inner workings of the mirror."

"Good. Let's get rid of that thing in there."

"There is no point in that."

"That's a piece of me in there, in a living hell."

"It is a moment of your past. Let it be."

Owen turned to Kali. "I can count on you for the truth, can't I? Can it be . . . put out of its misery?"

"In principle you could collapse the field, but you would need to reach into the mirror to reach the controls, and when the field became opaque to your pattern, you would lose your arm. Shall we give it a try?"

Repo answered for him. "Not worth the effort. One moment, endlessly repeated, is to itself still a single moment. Wouldn't it be better to use your access for something more interesting?"

"Ghurka owes you," said Kali. "He'll get something for your pattern, but you weren't properly paid."

"What do you propose?"

Repo stepped toward him and spread his fat-knuckled, long-fingered hand on the mirror. "This is a doorway as well as a storage medium. Just as your moment is trapped inside, so it also stores an essence distilled from our ancient past, which Ghurka brings to life in his performance. Memory is a vibration. So is our presence here and now. From instant to instant, you are dissolved into a wave function and recollapsed into a determinate being. The space you live in resonates to your pattern and strings it out through time. Where you are depends on how this vibration propagates. This mirror has modes of vibration that connect its moments in a different order than that of the spacetime in which it is embedded."

"Just tell him that it's another dimension," said Kali. "All you need to understand is that much of this mechanism is *elsewhere*. Also, it is locked from inside. But you are able to reach in and reset its program."

"You mean, we could *go* someplace? We could go through it to some other level?"

"No," said Repo. "You misunderstand."

"You said it was a doorway."

"This device is not fully functional. It is a *component*, a surplus, obsolete component that Ghurka has adapted to his own use. Going through it would distort you rather badly, I'm afraid."

"But you *could* reach in, and pull something out—a souvenir, something to pay you for your trouble."

"Like what?"

"One never knows. Don't expect too much. Remember, what goes through the mirror will be distorted. Otherwise, you might create a paradox. Paradoxes are permitted only if they are benign. You can see the future, for example, only if you do not understand what you see. But a *piece* of the future, or of some distant world stored in the history of the mirror, even if it's an enigma, might be worth something to a man like you, eh?"

"I get it now. You want me to reach through and steal something for you."

"Not through the mirror," said Repo. "*Into* it. We want a piece of the mirror's inner workings, a piece of memory, or interface—you have no equivalent concept. A redundant piece that would not be missed."

While Owen hesitated, Kali said, "It would not be stealing. He *owes* you for your captured pattern. Right now he's laughing at you!"

Then Repo, too, made a stab at what was on his mind. "It may seem hard for you to reconcile with what you saw. The voices that speak through him in his drumming are the inner lives of a time long ago, with evolution at stake, agonizing over what to leave behind and what to create as we became what we are now. Like music in your culture, what speaks through Ghurka's patterns conveys something beyond words. But what speaks through him is not what he *is*. In himself, he is grotesque, and ruthless in his purpose."

"If I do what you ask," said Owen, "then for my payment I want the mirror itself."

"Impossible."

"Not to keep. You said it's being passed around to dealers who want to study my pattern in there. How about passing it around to me? You've already slowed it down on its way. Can't you put me in line for it? Say, for about a week?"

"No. You want to reverse engineer it. That could not go undetected. Your scientists would take it apart and be unable to reassemble it."

"I wouldn't do that. It would just be for my own use. No one would know."

"Then use it here, in our presence."

"I want to show this to my son, and to Leya. So they don't think I'm crazy. I want them to see what they're missing."

"Then why do you need it for a week?"

"Okay, for a day."

"An hour."

"Four hours."

"Agreed."

Owen wasn't sure if the room was turning around, or if the sudden flurry of activity was making his head spin. The aliens pulled equipment out of the walls and assembled it with amazing speed, sometimes sitting poised on one leg while using the rest as arms. Then Kali gently positioned Owen in a crouch near one edge of the mirror, and took his hand.

"Reach in here, carefully . . . there should be a control panel within reach. See if you can touch it, but do not disturb its settings."

His arm felt a bit rubbery as he moved it around. "Why don't I just have a look."

But Repo grabbed him before he could stick his head in. "That would not be wise."

"Then why is it wise to stick my arm in?"

"Your arm contains no vital organ."

As Owen was about to reply, his hand brushed against something in the mirror. "I think I've found it."

"Don't move."

From out of sight behind Owen, Kali was attaching something to Owen's head.

"Don't move," repeated Repo. "You must not collapse the field."

"What's he doing?"

"We need to map the layout of the control panel by touch. To do so accurately, we must superimpose your hemispheres."

"It will feel strange, but it is harmless. Begin."

Immediately, Owen noticed a jumping of his visual field from left to right, back and forth, as if he were closing one eye, then the other. As the tempo of the shifting picked up, he also noticed a shaky feeling within himself, again from side to side. The change came faster and faster, and reached into his mind—one half of him realized that the two lobes of his brain were being alternately turned off and on, but the other half of him had no words for what was happening and was terrified. The vibration accelerated through him like a tuning fork driven into his spine. He tried to cry out, but all he could manage was a garbled scream.

Then, suddenly, the two alternating halves merged into one. The two halves of his body were suddenly superimposed. He instinctively changed his position to bring the two halves into alignment. At first there was some flickering due to the superimposition of mirror images, and then, like the sudden shift of inside and out in an optical illusion, even that passed. He didn't feel split into two halves. He felt as if both halves were the same, that he was now a being with one arm, one leg, one eye.

"Are you all right?" asked Repo, his voice distorted by some kind of electronic device. "May we proceed? Indicate assent by closing your mouth."

With a jarring of his teeth, he closed his mouth, more out of obedience than true assent, his mind too fogged to have much volition of its own. Fortunately, he wasn't required to do much. As Repo ran his left hand over a mockup of the control panel, Owen's hand in the mirror followed the movement. Since the two hands moved in synch, they were able to trace the layout of the panel. Then, by operating his free hand, they could make his right hand enter codes into it.

They explained what they were doing as they went along. "We are now unlocking the access control." Answering a question that Owen had not asked, he added, "We measured the movement of Ghurka's muscles beneath the skin of his wrists." And while Owen puzzled over that, "We are now inserting your home into the lending queue for four hours. . . . Now we are coding access to the interface."

The superposition effect was released suddenly. He saw double for a while, and *felt* double, and had to be propped up to keep from falling. Then, when his eyes merged their images, the doubleness he was feeling became normal to him once more.

"Damn it!" He rubbed his hands together as if to reassert their independent existence. "Don't spring things on me like that!" He turned to the headset gear on the floor behind him and kicked it away.

"The calibration is finished," said Repo. "All that remains is for you to retrieve the interface."

"That's all, huh?"

"It should look like this." Repo held out a mock-up that looked something like a metal rib cage enclosing a sheaf of twisted tubing. "Close your eyes and learn to recognize it by touch."

"Okay, that's simple enough." They taught him how to unplug the component, and then he reached into the mirror. This time, his arm felt very rubbery. His sensations were so distorted that it was hard to tell the shape of what he was touching. His hand became tangled in what felt like an organic ooze of some kind, then moved on till he found the interface. With a little coaching, he disengaged it. The mirror seemed to cling to it as he pulled it through the surface, as if it were breaking through a plastic film.

It was heavier than the mockup, somewhat charred-looking. And peeking through the ribs, blinking silently, were living eyes. With a spasm of disgust, he tossed it away.

Repo caught the device and held it up to the light, then turned and began hooking it up to some equipment with Kali's assistance.

"What the hell is that?" Owen repeated, moving closer. "Why does it have eyes?"

"Same reason as you," said Kali impatiently as they bent over their work.

"You said you were getting components. This thing is *alive*, isn't it?"

"It is a component. It is alive. It will not remain alive if we cannot attach life support."

"Put it back where it belongs! Do you hear me?" He pushed forward and tried to grab it. He was met by a tangle of arms, but he managed to grab onto one of Kali's eyes. "What happens if I yank this out, huh?"

"You would regret it for the rest of your life."

"Is this connected to your brain? Shall I do to you what you made me do to this poor creature?"

"Do not interfere with us," said Repo as he stooped over the device.

Kali let go of Owen and held out his arms in the attitude of appeasement. "Did I not tell you that Ghurka preys on children? What we have extracted was a child once. Can you imagine being interfaced to this machine, thinking its thoughts, being its eyes? If we succeed, this component will be interfaced to Repo. It will live again as an *organism*. What it knows, *we* will know. It will be free to ascend the states of being once again!"

Owen let go and stepped away, his lips pressed tight, his hands shaking. He'd almost been ready to kill them. Or, more likely, gotten himself killed.

"It's not stabilizing," said Repo. "There is a piece missing—look here." He pointed out something to Kali. "Can you read the coordinates from here?"

Kali stooped down and attached a device to the dying piece of flesh and metal. Then he stood and came over to Owen. "We need another piece."

"Oh, hell."

"A vital component is missing. It will die if you do not . . ."

"Let me just put it back, then."

"Not possible. What has been ripped out cannot be put back so easily."

Owen sighed and shook his head. "Okay," he said grimly. He didn't want to trust them any more, but there didn't seem to be much choice. He felt like a complete fool as Kali reattached the headset. At least this time, he knew what to expect.

But he didn't know what to believe. After the ordeal of setting the coordinates, he reached into the mirror again, grimly wondering if they even had any intention of fulfilling their side of the bargain. He pulled out another component, much like the first, and handed it over. For all he knew he might be stealing from a batch of experimental mutants, or helping to torture their enemies.

"What's going on? What is this place I'm reaching into? Huh? Why would an interface have eyes?"

They were too busy to pay attention to him. Owen paced around for a moment, then knelt down by the mirror and reached in to do a little

exploring of his own. His arm felt so distorted, he pulled out quickly. Then, reassured, he reached in again.

His arm felt stretched out thin, like a piece of gum. It seemed to reach for miles. And the boundaries of its chamber felt very small this time, a mere box, almost featureless, with a shape that made no sense to his distorted hand. It seemed that there was only one way he could have a clue about what kind of place he was reaching into.

He stuck his head into the mirror, and immediately wished he hadn't. He had the same sense of being strung out grotesquely. Not only was his neck ridiculously long and flexible, but his face seemed to have the mouth of an anteater.

He had the suffocating feeling of having plunged into deep water. The surface of the mirror clung to him like a membrane he couldn't quite break through. At first, he saw nothing in the darkness, but, as his eyes adjusted, he began to see a star or two, though they wobbled strangely—or was it his eyes that wobbled? And off in the distance, a mountain range with cliffs, or were they buildings, dark and empty-looking, and hard to see, black against black. Or were they just rocks? He had no sense of scale. If only there was something recognizable!

Then a movement caught his eye. There was something alive in the distance. When it stopped, he lost track of it, but when it moved, in quick darts, he could sense where it was without being quite able to make it out. It was coming *toward* him.

Instinctively, he groped for a weapon. But his arm didn't seem to be in the same space. He couldn't see it—he wondered if his neck had stretched out so far that his arm was *behind* him. He groped around and uprooted the only detachable object he came across, but he couldn't see what it was.

Then there was a silent flash of light that blinded him, like a nuclear blast, but it didn't fade. When his eyes adjusted, he got a look at what was coming after him. It had many legs jabbing out of a batwing layer of skin, a pair of scorpion-like tails with eyes instead of stingers, and a jaw in the main body ringed with drooling mandibles.

He tried to pull back, but he couldn't pull back fast enough. He raised his weapon and tried to pick a place to strike. How did he get stuck so far into the mirror? His movement was agonizingly slow. The creature was being very cautious. Could it see his upraised hand? Then it made a break for him. There was no choice, he was going to have to strike blindly.

It was almost on top of him when suddenly he was pulled free. Repo had an arm around his waist. His head was out of the mirror, but he cried out in pain, and saw that his arm was gone. His sense of reality gave way to a sense of nightmare. The aliens seemed to be tearing him apart, like animals feeding on him. He struggled weakly, but they had

too many hands. Then he felt resigned and wanted to get it over with. He saw one of them squinting his multiple eyes as blood spurted into them.

As he sank into a state of shock he realized that Repo was applying a tourniquet, and talking, but not to him. "He's fading. Bring me the resonator and look up the location of his autonomic functions. I think the stem of his brain. . . ."

"Don't waste time," said Kali. "Can't you see what happened?"

"It doesn't matter now. Whatever he reached into . . ."

"Not that. Don't you see? The field collapsed. It was cut off from the other side."

"You don't know that."

"He's on to us, I tell you! Help me stash this. Quickly."

"No! I need that equipment. He's dying."

"Set him on fire, let's get out of here."

Then there was another voice, deeper, older—the voice of the shaman. "You seek self-preservation? But why? What is worth preserving?" He had emerged into their bubble through the ceiling, and clung to it with his many legs, his head revolving so that all his eyes could see as he lowered himself to the floor. "Look at what you have done. You let him reach blindly into spacetime. You should be reassembled into greater selves who would never dream of doing this."

"We never meant to harm him."

"The circle must be closed! This is a law of nature!" With one arm, he slammed the mirror into the substrate. "It cannot be violated!" The children were whisked away, their arms flying up in surprise.

Then the shaman bent over Owen and worked on his stump. The bubble walls closed down around them, and Owen felt the floor tilt, and the sudden weight of acceleration. The shaman spoke in a soft, slow voice.

"Don't struggle against what is happening to you. Accept it, and know there is time to save you. We will soon be at a medical facility. I have no sedatives to ease your pain, but there is a way to detach the pain from your momentary awareness. With your consent, I will perform hypnosis."

Owen tried to speak, but the gasping sound he made just evoked a beep of non-recognition from his translator. He nodded, hoping the alien would understand.

"Close your eyes and listen to me. Let the sound of my voice organize your thoughts. Let the cells of your brain perform the miracle of translating sound into meaning. Let your extremities relax. With each breath you take, let sleep wrap your body like a blanket, and pretend you are falling in slow motion, falling with the world and all the stars through space, falling with all of space into time. Withdraw from your body into the seed of your mind as you do every night, which you call sleep.

"Your pain is far away now, for the state of mind you are in resides in

a region of your brain where pain does not enter except as translated into symbols and experienced abstractly, like a memory that you live with as you live everything in your life that cannot be changed.

"When you awaken, you will be at peace. You will not dwell on your fate, nor torture yourself with hatred of those you hold responsible. You will feel no desire to complicate the delicate balance of human-Nmeri relations with vindictive litigation, for to cling to your suffering would only deprive you of the serenity to discover that what your experience has revealed to you is worth the price you must pay."

Owen saw the next two days in the hospital through such a fog that his own fate didn't seem to concern him personally. He had the idea that they were pumping him full of drugs to keep him from dying of shock, but what was the point if his feelings were dead?

He tried to explain it to the doctors, but they just humored him. They weren't really doctors, anyway. They just did what the machine told them to do, the expert system. They were just giving him what a machine would have wanted if a machine could have wanted to be him.

He laughed at that thought, then realized he hadn't just thought it, he had said it aloud, and Leya was standing beside his bed. Her hair kept falling over her face. Her eyes looked weary and red, though her mouth, when she smiled, looked remarkably youthful. She talked to him soothingly, as if he were a baby, and, like a baby, he didn't understand what she was saying. He closed his eyes while she babbled.

When he opened his eyes, the lights were out, and there was something in his hand. It was his datasette, loaded with all his favorite music. He went to sleep listening to it, too numb to rise into it, and weighed down by the awareness that he'd ignored her. She was so good, but what good is music when half your mind is half asleep, and the other half is, too?

The next morning, he didn't want to wake up. He wanted the fog to come back. He wanted to die and not have to exist any more. He wanted everyone to go away and forget about him.

"It's Monday, welcome to reality," said the doctor when Owen asked what day it was.

To Owen's annoyance, the doctor didn't go away while he ate breakfast, but stood there making small talk and little observations about learning to be left-handed, and some simple tricks about how to tie a knot or zip a zipper. Well-intentioned, but depressing. Yet, those little things, he could do that. He could adapt.

But he wished he could brush aside everything mundane and go back to the dream he'd been having. Or had it been a dream? There was a magician, and being thrown up with all the sparks into the sky, and pulling out of a mirror a thing with eyes.

One moment, he closed his eyes and leaned back against a stack of pillows, the next moment he was alone in his room, the daylight filtered through closed shades. This time, the feeling of the dream lingered—walking across dark ice, and looking down into it, and seeing a tangle of snakes, rooted like seaweed but with eyes down the length of their bodies, and he could still feel the panic of seeing all those eyes and somehow knowing they were his own.

It was just a dream, and the sense that it was real lingered as long as he held still and refrained from putting his thoughts into words. Then the door cracked open again and someone said something to him. He turned his head quizzically and they went away.

Then the doctor came in, smiling, too friendly for a stranger, and asked how he was. "Feeling ready for visitors?"

"Leya?"

She came in but she wasn't alone. A stout man with sagging cheeks and sad-looking eyes came in with her, but held back while she greeted him with a kiss that seemed more form than feeling.

"How are you doing? Are you in pain? You're going to be all right. I was here before, do you remember? You didn't seem to know me."

The things she said seemed normal enough, but there was something she *wasn't* saying. Something was bothering her. Was it the presence of a stranger?

She introduced the man as Detective Morgan. He shook hands left-handed, which seemed funny to Owen. "I'm sorry to intrude," he said. "But we need to move fast on this. We need to know exactly what happened."

"Be careful what you say. He's recording this."

"There's no need to get defensive."

"Anything you say can be used against you."

The detective smirked. "What is this, are you arresting your husband?"

"He's an ambitious man, Owen. He's out to crack down on black marketeering with the aliens, even if he hasn't got a case."

"Hold on a minute. I haven't even opened my mouth, and you've got me tarred and feathered. You're not charged with anything at this time, sir. You've got your legal advice, here—I understand your wife is a paralegal. There's nobody on this planet better qualified to look out for your interests. All I want to do is get at the truth. First of all, who did this to you?"

"I don't know."

"Do you think you could remember him if you saw him again?"

"No. I mean, I don't remember."

"You can't say if it was human or alien?"

"I don't remember anything."

Morgan grinned and shook his head. "See, now you've got him spooked. He's afraid to *say* anything."

"He couldn't be telling the truth, huh?"

He sighed and said to Owen, "I've had a look at your medical record. You don't have any head injuries. There are no alien substances in your blood. How come you can't remember?"

"You don't have to speculate," said Leya.

"Okay, just what *do* you remember, then? Do you remember signing these papers?" He held them under Owen's face. Owen nodded. "What happened after that?"

"Then, I rode out on the moat. I remember going down into the substrate . . . that's all."

"That's all? So I can just pack my bag and drop the whole thing, is that what you're saying? Let me tell you straight—I can see right through you. I've been dealing with crimes against humanity since before you were born. . . ."

"We're not interested in your life story," said Leya.

"And you might be better off to counsel your client to cooperate. I'm an old dog. You stonewall me, and I can't help but wonder what you're *hiding*. If you stuck to your contract, what have you got to hide? But if you traded one drop of blood, if you traded as much as one clonable cell, you've committed a serious crime."

"You've got no evidence he traded anything."

"*There's* the evidence." He pointed to where Owen's arm would have been. "There's plenty of clonable tissue in an *arm*."

"That's crazy. Do you really think he'd chop off his arm when a drop of blood would do? Do you think he'd consent to that?"

"I can't know what he consented to. That's what I'm trying to find out. Look here, ma'am, what you both need to realize is, I've got no personal interest in making you suffer. What's at stake here isn't just what happens to me or you. We've got a *law* to balance what we get from the aliens and what we'll allow them to do to us. And they're tricky bastards, there's no question. I've got no reason to doubt that when you signed those papers, you had no intention of going beyond them."

He rubbed his chin. "But once they had you on some innocent pretext, they lured you in deeper until you were in over your head. And *now* look what they've done to you! You're not the first, and you're not going to be the last. But you might be able to stop it from happening to somebody else in the same way. You've got some bad times in store now, thanks to them. But what you're going through doesn't *have* to be meaningless. What happened to you can be a *warning*. Do you hear what I'm saying?"

"I wish I could help you."

"Don't just wish. Contrary to what your attorney says, I didn't come

here to nail you. I want to nail the bastards that *did* this to you. We've got more leverage than you might think. They'll submit to the law, if we can make a case. I'll say that for 'em. It must be so, or they'd have long since *taken* what they wanted and not bothered about consent. I'm prepared to see you go free on probation if you'll turn in state's evidence."

Only now did Owen notice how strangely peaceful he felt about the aliens. In spite of what had happened, he couldn't bring himself to testify against them. "I'm sorry, I just don't remember."

"I don't want to have to place you under arrest. . . ."

"No, you don't. I've got a ruling," said Leya, tossing her slate onto the bed. Morgan gave her a sideways look and picked it up.

While he was reading, she explained to Owen, "I've got a ruling from the Expert System. He hasn't made a case. There's no grounds for a warrant."

"Just so you understand," added Morgan. "This is a *preliminary* ruling. This is an artificial intelligence, making a judgment. It's subject to review by a grand jury, composed of *human beings*. They're going to take a look at you, and they're going to want justice. If you press charges, they'll be behind you, and they'll see how you suffered, and they'll be open to any kind of mitigating circumstances you can come up with—or you can stonewall, and they'll see you as an obstruction of justice, and that you must be hiding something *pretty* damn ugly to let the aliens get away with this."

He paused portentously. "Now, ma'am, believe it or not, I appreciate what you're doing for your husband. It's just as well you bought him some time to think it over before any irreversible steps are taken. You know the law, so you know what kind of trouble he's in, so I can count on you to talk some sense into him. I'll leave you alone, now."

He left, and Leya put away her computer and pulled a chair up beside Owen. "How do you feel?"

"I was doing all right until *he* showed up. How about you? I'm almost surprised you aren't helping him put me away."

"There's an idea. Put you away, make an example. Get your bad influence out of our house." A smile flickered over her face, then faded. "Were you telling the truth?"

"Yes. I really was feeling better until he walked in."

"You know what I mean."

"Sort of. It's just that I don't really trust my memory, yet. Not in the light of day. When something happens that's so . . . different, it seems like a dream." He looked at his stump, with the pajama sleeve pinned back. "That doesn't seem real, either."

"What do you remember? What happened?"

"It's hard to describe . . . I think I experienced time in a new way. . . . How's Tyler taking it?"

"I don't think it's sunk in yet. Did Ghurka do this to you?"

"No. It was an accident. I don't want to make you an accomplice by saying too much." He dug in the elbow of his good arm to lean forward. "You know," he whispered eagerly, "you haven't asked me if I thought it was worth it."

"Oh, don't start that." She stood up and paced back and forth, then said, "I'll be right back."

She left, and through the open door he got a glimpse of Tyler waiting out in the hall, slumped in a chair.

Owen fell back and let his head sink into his pillow. Why did life have to be so complicated? Why couldn't he just be free to make the best of being alive? The outcome of his acts didn't seem to correspond to the motives that went into them. And it wasn't just his own life he was messing up.

Tyler dangled his legs off the chair and thumbed through storybook images on his slate. He found a picture of a castle in the mountains, and toyed with the colors of the sky, then rotated the castle so that he could look into it from above. Then he zoomed down into the courtyard, lit now by an eerie purple twilight, and pretended that with the right combination of settings he'd be able to make it real.

When his parents came out of the hospital room, he searched their faces to see if they had been fighting. He didn't want to be seen looking at the empty sleeve. He cried a little when he was hugged, and smiled when Owen said, "Just call me Lefty!" He gave his father the get-well card he'd made, and felt embarrassed by their praise for it.

They went to a little restaurant, and everybody seemed happy. Tyler talked excitedly about the things he'd been making on his slate, and he showed them a new game and they played it with him.

But when they got home, they had an unexpected visitor. In the middle of the living room, like something that grew up out of the floor, was an alien. Leya started shouting at it without her translator. It sat calmly, clicking like a set of hollow drums. When she pulled at its arm, it merely planted all its others, and remained in place.

"He's here to observe," said Owen, fishing his translator out of his pocket. "It's what we agreed to, remember?"

"This is not the *time*, damn it! Who is this? Is this Ghurka?"

"No. It's just an observer. . . . He says he realizes this is a time of crisis for us, which makes us more interesting to observe, and he's willing to add an additional incentive."

"Are you crazy? Whose side are you *on*?"

"I'm just translating."

"Well, translate 'get lost.'"

"It's *our* side of the bargain, you know. These observers, you know how they are. After a while, you forget they're there."

"Look, as far as I'm concerned, they're paid off. They've got your arm, that's enough!"

The creature rose to leave. "He'll come back at a more agreeable time. He says he's sorry he upset you." Tyler tried to fathom the movement of the creature's legs as it walked. "They don't understand privacy," said Owen, closing the door behind it. "Imagine the concept from their point of view. As they accumulate lives, being able to remember having *been* each other kind of does away with privacy."

"We're not aliens!" They locked eyes for a moment. Then she turned to Tyler and bent down to him. "Don't be mad at Daddy. He's been through a lot, and now he still can't decide if he wants to be a human being."

"What the hell is *that* supposed to mean?"

"You care more about *them* than what you're doing to *us*!"

"It's not my fault that some jerk wants to play politics with my life. If you don't believe in me, I'll get a lawyer who does."

Tyler's mother turned to him again. "See, this is why you should never deal with aliens. I know it seemed like I was being mean, but now you can see what it's done to your father."

"Is *that* what you've been telling him?"

While they argued, Tyler ran away to his room. He felt like he was going crazy. He started smashing some of the models he'd once made so carefully in virtual reality and then rendered in plastic. His parents rushed in to calm him down, and seemed to calm themselves down at the same time.

Things went back to normal after that, but not really. Everybody was putting on an act, and so Tyler put on an act, too, though he was afraid that he wasn't any good at it and didn't know what he was supposed to say.

When they put him to bed that night, they tried too hard to make him happy. They read him stories, and then made *up* stories. His father began to tell him a story about a magic mirror that you could reach into and pull out wonderful things.

Then he got stuck, and, just as they always did when one of them got stuck, the other parent continued the story. Leya told him how the hero met an old man eating an apple and told him what he was carrying, and sold his magic mirror and all the wonderful things he'd pulled out of it in exchange for a magic apple core. And when the hero planted the apple core, an evil, twisted tree grew out of it that poisoned the ground where it stood and wouldn't let birds sit in its branches. And when he chopped

it down, two more sprang up, and when he chopped them down, four more sprang up, and by the time he had finished chopping, a vast evil forest had sprung up.

Then *she* got stuck, and Owen hadn't been paying attention, so Tyler pretended that he was about to fall asleep, and they left him alone. He lay awake for a long time, embarrassed at being treated like a baby, yet missing how it used to be. He didn't even notice when he had fallen asleep—his dream was of lying there, awake. Only when he realized that he was looking down at himself from a vantage beside his bed did he wake up. At first, he was afraid to turn around and see if he was being looked at. Then he forced himself to look, and saw his own face.

He was looking at a huge, dark mirror that had silently risen from the floor. He was afraid of it, but, at the same time, he knew that it must be magic, and that it must have come to him for a reason. He got to his knees and examined it. Carefully, he touched the surface, so cold that it almost burned.

He knew that it wasn't a human artifact. He was trying to make out something inside it and wondering what to wish for, when the voice of a child trapped deep inside it said "His arm. Please bring back my Daddy's arm."

He drew back and almost screamed, but a scream would break the spell. The mirror had told him what to say. Then it spoke again, this time garbled by the clatter of the alien language.

What was it trying to say? He was suddenly afraid that he might lose his chance, so he made his wish out loud, and waited. Nothing happened. Then it occurred to him that an alien mirror wouldn't understand, so he got his translator and repeated the words.

Then he realized he had been talking to himself. It was his own voice that had come out of the mirror. He had heard the words *before* they had been spoken! While he was thinking about that, the voice spoke again. "Go to sleep, and when you wake up, everything will be all right."

He got back under the covers and curled up, full of hope, even though he knew he'd been talking to himself. He wondered what would happen if he *didn't* speak the words—then where would they have come from? But this wasn't the time for that. Nothing must break the spell, so he turned to the mirror and said, "Go to sleep, and when you wake up, everything will be all right."

He was sound asleep when a spot high in the mirror bulged out and elongated into an enormous, silvery arm, with a hand that wobbled like a sack of water as it groped awkwardly along the contours of the room.

Owen was in a deep sleep from the pain-killers he'd been taking. He tried to ignore being yelled at. Even when he found himself dumped on

the floor, he would have rolled over and gone back to sleep if he hadn't noticed that his wife was running down the hall and his son was screaming.

Then he couldn't move fast enough. The floor seemed to tilt beneath him. When he got to his son's room, his eyes couldn't focus at first on what he was seeing.

A giant fist held Tyler upraised, as if the boy were a club. Leya clutched at an edge of the blanket that had been grabbed up with the boy, but she was jerked around like a doll as she tried to climb to the fingers.

Owen didn't get far before he collided with the thing's elbow. He was thrown to the floor, and rolled to his knees facing the mirror. A chill ran up his back when Tyler screamed and Leya pleaded, "It's crushing him!"

He stifled his urge to run to the boy and instead scrambled over to the mirror. Then he reached into the mirror and groped for the control panel.

He tried to look back over his shoulder, but couldn't turn his head far enough. With his chin in his shoulder, he cast his eyes downward and saw something so strange that he froze with his hand on the controls. Dangling from the bottom of the mirror, sheathed like the arm in the mirror's shimmering film, was a long thread no thicker than a strand of spaghetti. It was slowly being sucked back into the mirror.

It was being chased by a tiny bug. A bug that Owen now realized he had seen before, from another point of view. He didn't want to see it, but he couldn't take his eyes off it. At the tip of the dangling strand was a tiny human face, his own face, grotesquely distorted by the passage through space and time.

He had been here before, or rather, *was* here, now, twice, in two forms, one not knowing where it was, holding it knew not what in its hand to smash what it thought was a monster. Owen remembered his old fear though he no longer identified with it. He had a new fear now. His only chance was to shut down the field, but not yet. He had to wait till the head was withdrawn. He couldn't sever the head because he had not.

When he slammed the controls to their null settings, he fully expected to lose his remaining arm. The giant arm collapsed like a bubble as the field became opaque to his pattern. But the mirror didn't become impermeable all at once. That fact dawned on him slowly, first in the form of puzzlement when the pain he expected did not occur, then more vividly when Leya and Tyler screamed at him. They could see the opaque surface, mirror-bright, descending like a blade over the dark part of the mirror he was reaching into. He barely pulled his arm out in time.

Leya tugged at him, with Tyler in one arm, and they stumbled over each other into the hall and fell in a heap.

"It's okay," said Owen, holding her down to stop her from running headlong. "It's okay, it can't get us now. I shut it down. I know what

happened now. We're safe." He hugged his crying child. "It's okay. It can't get us now."

"Oh God, I thought I'd lost both of you!" said Leya.

Owen gave Tyler a squeeze. "I thought I'd lost this baby." Then he held up his hand and wiggled his fingers. "I thought I'd lost *this* baby, too. I never thought I'd be so glad to have only one arm!"

Leya surprised him by laughing, and then her laughter became hysterical, and infected his son. And when the two of them looked at him with laughter in their eyes, it was one moment that he wished *could* last forever. ●

THE OLD ASTRONAUT SINGS TO THE MOURNING STAR

Let me fall into the stars,
there's nothing left to hold me here.
Come cut the tether of my years
and let me tumble far and far.

I feel the pull of distant suns
I feel the drag of far event
horizons I was always meant
to trek to when my time was done.

Black holes beyond this star disk's rim
are pulling me with unseen force,
the loneliness of age is worse
than spinning out where stars go dim.

Come, let me fall into the sky;
for me, it would be sweet return
to where I saw the starfires burn
when I was young and could not die.

—William John Watkins

NEXT ISSUE

JUNE COVER STORY

James Patrick Kelly, one of our most popular writers, takes us to an alien-operated space station in close Earth orbit that might prove to be the gate to the wide universe beyond for humanity—if we can only learn to “Think Like a Dinosaur” . . . and if we are willing to pay the price such thinking entails. . . . Don’t miss one of the year’s most controversial stories!

BIG-NAME AUTHORS

Hugo- and Nebula-winner **Geoffrey A. Landis** takes us “Across the Darkness” on an epic and urgent space voyage that may decide the fate of humanity itself; Nebula-winner **Pamela Sargent** examines the kind of relationship that persists even after life itself, in the bittersweet “Amphibians”; critically acclaimed British writer **Brian Stableford** takes us to a high-tech future for a look at an unsettling “Age of Innocence.”

NEW WRITERS

Virginia Baker makes a chilling debut with “On the Last Day, God Created”; **J. Brooke** spins a subtle web of intrigue, art, pride, and betrayal in “Scorpion’s Kiss”; **S.N. Dyer** and **Lucy Kemnitzer** (making her *Asimov’s* debut) take us to Ancient Iceland for a most unusual detective story, “Thorri the Poet’s Saga”; **Steven R. Boyett** returns to set us “Drifting Off the Coast of New Mexico” along with some odd and unexpected companions.

FEATURES

Robert Silverberg’s “Reflections” and an array of other columns and features. Look for our June issue on sale April 25, 1995.

COMING SOON

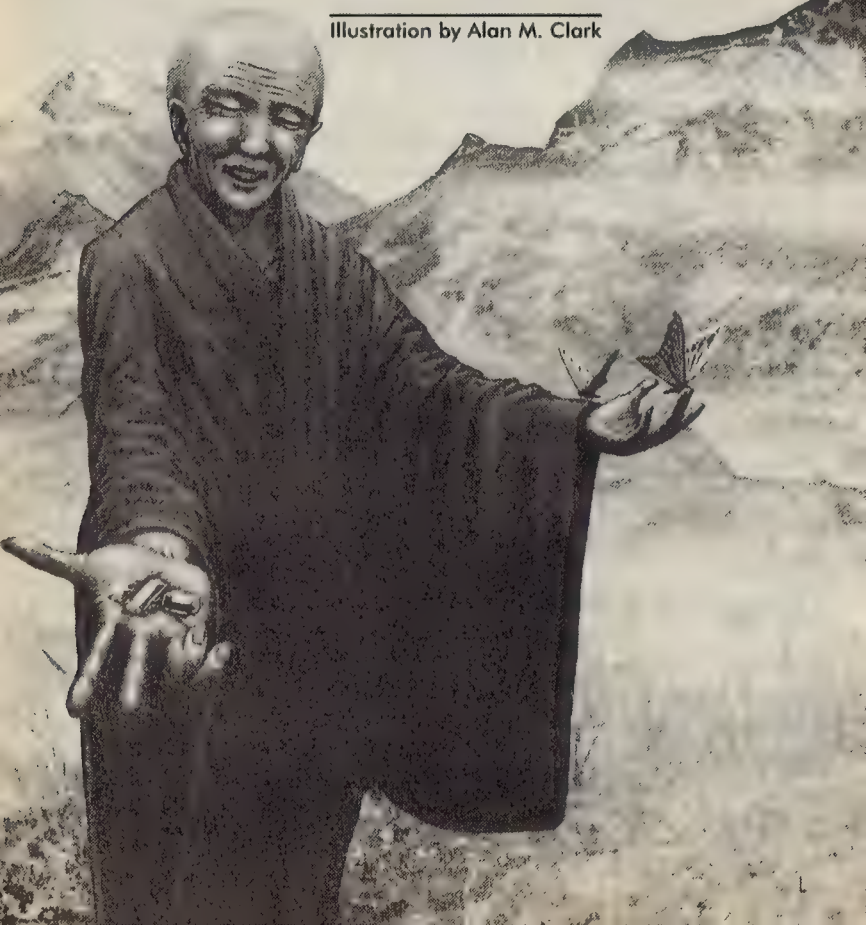
Ursula K. Le Guin, Nancy Kress, Howard Waldrop, Allen Steele, R. Garcia y Robertson, Tanith Lee, G. David Nordley, Harry Turtledove, Mary Rosenblum, Brian W. Aldiss, Jack McDevitt, John Brunner, and many more.

Pat Murphy

A PLACE OF HONOR

"A Place of Honor" was written in a tea house in Tumlingtar, while Pat Murphy took a break from trekking around Nepal. The tale was inspired by a Sherpa legend and the sight of dragonflies and butterflies soaring over rice paddies in the Arun valley.

Illustration by Alan M. Clark



On a sunny afternoon in early October, Jigdel Gonbo Sherpa climbed the steep trail to the Nanpa La. He whistled and shouted at his three yaks, urging them up the slope. The beasts were loaded with goods from Tibet: thick cloth woven from sheep's wool, dried mutton. The pouch at Jigdel's waist was heavy with jewelry.

Jigdel congratulated himself as he trudged up the trail. He considered himself an excellent trader, a clever man who knew how to drive a good bargain. He had made a fine profit on the rice and *tsampa* he had carried to Tibet, and he was on his way back to his home in the Khumbu Valley. He was eager to get home to his young wife. When he had left her, two months before, Bhoti Aphe Sherpani had been pregnant with their first child.

At the crest of the pass, passing travelers had gathered stones from the rocky slope to build a *chorten*, a rough tower of irregular stones, topped with prayer flags. The prayer flags—once brightly colored—had faded to white in the intense sunlight of the high altitude. Jigdel could barely make out the dark letters of the mantra that had originally decorated the fabric—*Om mani padme hum*. Hail to the jewel in the lotus, the jewel being the Buddha and the lotus being the heart of the world. Each time the wind blew, it snatched the prayer from the flag and sent it to travel the breezes.

Like any sensible man, Jigdel started around the chorten to the left, circling it clockwise, the direction in which prayer wheels turn, the direction required by respect and prudence. But one of his yaks was wandering away, stubbornly heading around to the right of the stone tower. Jigdel grumbled under his breath and pursued the beast, rounding the tower on the wrong side. He caught the animal and slapped it on the rump with the stick he carried, driving it back in line with the other beasts. As he did so, he caught sight of a man sitting in the shade of the chorten, an elderly Bonpo holy man, resting after the long climb.

Like most Sherpas, Jigdel was a good Buddhist. But as a Buddhist he respected the power of the Bonpo sorcerers, whose religion had preceded the enlightenment of the Lord Buddha. They could work charms that caused women to fall in love, exorcise demons, conjure up good luck, and turn into ravens, if they liked.

"Namaste," Jigdel greeted the holy man politely. He sat down on a boulder nearby and they exchanged the usual questions asked by travelers. Where are you going? Where have you been? How is your business?

As they talked, Jigdel studied the man. The Bonpo wore a *chuba*, the long woolen Tibetan robe. Around his neck he wore a string of beads fashioned from dzi stones. Jigdel eyed the stones, wondering how the man had come by so many of the precious agates, so valuable among both Tibetans and Nepalis. Such stones, Jigdel had heard, were made

by magic. Throw the clothes of a holy man over a certain type of caterpillar, and the caterpillar would be transformed into a beautiful stone with elegant markings.

The Bonpo was returning to Tibet, after a visit to the Khumbu. His business was unclear, but so it usually was with sorcerers, and Jigdel did not inquire at length. For a time they chatted, discussing the weather (fine, very fine), trading conditions in Tibet (good, Jigdel thought, quite good), and the state of the trail (a small landslide on the northern slope of the Nanpa La had taken out a section of the trail, and Jigdel advised the Bonpo to take a short detour).

After a time, Jigdel asked the Bonpo about the matter that concerned him most. "Can you tell me," Jigdel asked, "how my wife is doing?"

The Bonpo studied Jigdel with wise dark eyes. "Perhaps," he said. He reached inside his chuba and produced a worn leather pouch. From the pouch, he shook a handful of small bones and gave them to Jigdel. "Toss them here," the Bonpo said, indicating a smooth slab of granite.

Jigdel rattled the bones in his hand and tossed them on the rock. The Bonpo's brown face wrinkled as he scrutinized the bones. "Again," he said, sweeping the bones into his hand and returning them to Jigdel. Jigdel threw the bones a second time. The Bonpo pulled his feet up under him, squatting beside the bones and peering down at them. Jigdel could easily believe the man could become a raven; he resembled one now.

"Once more," the Bonpo ordered Jigdel, and the trader complied, worried now at what made the Bonpo frown so. Was his wife ill? Was there some problem in his future?

At last the old man sat back on his heels and nodded. "Your wife has given birth to a son," he said.

"Is she well?" Jigdel asked anxiously.

"She is fine," the Bonpo said, waving a hand impatiently. "Just fine."

"And the boy?"

"A fine strong baby," the Bonpo said.

"Then why did you frown so?" Jigdel demanded, raising his voice a little more than was wise when talking to a sorcerer. But he had been worried, and he was not, by nature, a patient man.

The Bonpo smiled—not a pleasant smile, Jigdel thought, but the smile of a temple monkey up to mischievous tricks. "I saw possibilities, that's all. Nothing that need worry you. If you raise the boy as you should, he will be a fine farmer."

Jigdel scowled, angry that the man was concealing information from him. "You must tell me what you know."

The Bonpo shook his head, still smiling. "You will be happier not knowing."

Jigdel stood up, glaring at the Bonpo. "I want to know. What did you see?"

The Bonpo looked up at Jigdel, squinting against the brightness of the sky. "You are a stubborn man," he said. "I tell you it will be better if you don't know."

"I insist."

"Very well. I saw two paths for your son. He could grow up to be a farmer, a strong and happy man. Or he could grow up to occupy a place of honor in the court of the king."

Jigdel stared at the Bonpo, amazed. "In the court of the king?" he murmured. Jigdel was a prosperous trader, but his ambitions had never reached farther than another yak, a small addition to his house, another plot of millet added to his fields. Now, with the Bonpo's words, he realized that his dreams had always been too small. What was one more yak? His son could be an important man, an advisor to the King. He imagined his son as a grown man—a younger version of himself, dressed in a black chuba woven of the finest wool, with a belt encrusted with turquoise and precious gems.

Jigdel fumbled in the pouch at his belt to find a few coins, then pressed them into the Bonpo's hand. "Thank you," he said, repenting of his earlier bad temper. "Thank you, wise one."

"Remember," the Bonpo said, "he could also be a farmer. A happy man, working in his fields."

Jigdel shook his head, frowning. He scarcely heard the Bonpo. His thoughts were filled with the image of his son, so rich and important. "Or he could go to the King's court," he muttered.

Jigdel whistled to his yaks and drove them down the trail toward his home. As he hurried home, he wondered why the Bonpo had been so reluctant to give him such good news. Perhaps the holy man felt that spiritual enlightenment was superior to wealth.

It didn't matter, Jigdel decided. What mattered was his son.

The Bonpo was right. Jigdel's wife had borne a baby boy—strong and squalling, with thick dark hair and a round red face. Holding the infant in his arms, Jigdel looked down into his son's dark brown eyes. A court advisor, he thought. A man of wisdom and power. "You will be a great man," Jigdel told the infant. "A great man." The infant blinked up at his father and wailed for food.

Jigdel named the child Kira, after the Sherpa who first crossed the Nanpa La, opening the pass between Tibet and the Khumbu. Kira Gonbo Sherpa grew up in a small village in the Khumbu Valley, playing in the way of Sherpa youngsters. His mother and father were proud of him from the start and often told him of his promised destiny.

When he helped his mother plant buckwheat in the fields, toddling among the dirt clods, she told him "At the court, you will eat the finest foods and never have to get your hands dirty." When he chased the dragonflies and butterflies that danced among the growing millet, she told him "At the court, you will wear jewels as bright and beautiful as the butterflies." When he helped his father sell Tibetan wool in the market, Jigdel said, "At the court, you will wear much finer cloth than this—much thicker, much softer."

Of course, Jigdel and Bhoti had never been to court and had never seen the King. The King was in the distant city of Kathmandu, many days walk from the Khumbu. But they talked and they dreamed. On winter evenings, as Bhoti Aphe boiled tsampa porridge on the fire, she imagined bright jewels hanging around her son's neck. On trading trips, as Jigdel drove his yaks along the trail, he imagined his son at the head of a train of a hundred yaks—servants drove the shaggy beasts and the bells that hung from the yaks' necks were silver and gold.

Knowing of Kira's destiny, Jigdel and Bhoti did their best to prepare him for his future. Jigdel remembered the Bonpo's words: "I saw two paths for your son. He could grow up to be a farmer, a strong and happy man. Or he could grow up to occupy a place of honor in the court of the king." Jigdel wanted to ensure that his son chose the right path.

Living in a small village, it was difficult to prepare the boy for court life, but they did what they could. When Kira was old enough, they arranged for the village lama to teach him to write, for surely a court advisor had to know how to write. They had the best singer in the village teach him to sing, for surely singing and dancing would be important in the court.

These lessons sometimes made it difficult for Kira to do his work on the farm and help his father. When Bhoti needed help harvesting the barley, Kira was busy reading from the teachings of the Buddha, so that he might someday explain them to the King. When his father needed help loading the yaks, Kira was contemplating how he might advise the King on taxation—and surely loading the yaks was far less important than that. But somehow Kira was always available to lounge by the well when the village girls were washing clothes and tell them about how he would live when he went to the King's court.

Kira grew up to be a handsome young man. He had dark thoughtful eyes, shiny black hair, and perfect teeth. His hands were soft—he rarely worked around the farm. He did not go with his father on trading trips—the long days of walking tired him and he thought it was inappropriate that a man who would someday be so important sleep wrapped in a blanket by the fire and haggle over the price of wool. In short, he was

indolent and lazy, a spoiled child grown up to be a spoiled young man with a very high opinion of himself.

Kira wondered sometimes how the King would find him in this tiny village. More than once he thought about making his way to Kathmandu and presenting himself at court. But then he would look down at his clothing, the finest his parents could provide, and sigh. He could not go to court in the clothing of a well-to-do peasant. So he remained in the village, eager to find his way to his proper place in the world, but uncertain of how to do so. Often, he strolled on the paths near the village, looking up at the snow-capped mountains that surrounded the valley, and dreaming of his life to come.

One day, on a trail far from the village, he met a Bonpo holy man sitting on a boulder in the sun. "Namaste," the old man greeted Kira, smiling up at the young man.

"Where are you going?" Kira asked the Bonpo in an autocratic tone. He had, over the years, taken to speaking as if he were already very powerful. The man's chuba was tattered and dusty from the trail. Surely he could not be anyone important.

"To Kathmandu," the old man said.

"Ah," said Kira, in a self-important tone. "I will go to Kathmandu one day. At my birth, a holy man foretold that I would occupy a place of honor in the court of the King."

The Bonpo smiled. "Why that is exactly where I'm going. To the court of the King. He will want to see me."

Kira looked down his nose at the old man. "What would the King want with you?"

The old man grinned, his face wrinkling like a monkey's. "He will be glad to see me. He always is."

"And why is that?"

The Bonpo reached into his robe and pulled out a grimy leather pouch. He emptied the contents of the pouch into his dirty brown hand. Rubies, emeralds, polished turquoise, amber—the gems caught the afternoon sunlight. Kira caught his breath.

"The King is fond of gems," the old man said, still grinning.

Kira nodded. With gems like that, he would be accepted in the court. He spoke more respectfully than before. "Where did you get such beautiful gems? Did you bring them from Tibet?"

The Bonpo's grin widened. "Not at all, young man, not at all. I found them along the trail. Why this one . . ." He nudged a large emerald with a tobacco-stained finger. ". . . this one I found not half an hour ago. It's easy if you know where to look."

Kira stared at the emerald. "Will you show me where to look?" he asked the old man.

The man laughed—a harsh cackle that reminded Kira of a raven. “Oh, no, young man. Such knowledge is not for everyone. And now, I must be going.” With that, the man put the gems back in his pouch, put his pouch back in his robe, stood up and bid Kirā farewell.

Kira stood in the trail for a moment, staring after the Bonpo. It seemed impossible that the old man had found such gems by the trail. Kira had lived in the Khumbu Valley all his life and he had never seen such an emerald. There must be some magic involved.

As the old man passed out of sight around a bend in the trail, Kira resolved to follow him and learn his secret. Kira set out along the trail, staying some distance behind the old man, but keeping him in sight. Kira had to walk very fast—the old man was quick—but luckily he did not look around, always keeping his eyes on the trail ahead.

It was late in the afternoon when Kira rounded a bend in the trail and almost bumped into the old man. The Bonpo had stopped in the trail and was pulling something from the bundle on his back—a tattered gray cloak that he shook three times. Then he stood still for a moment, watching an orange and black butterfly that fluttered in the sunshine near the trail. As Kira watched, the Bonpo tossed his gray cloak over the butterfly, catching the insect in midair.

The old man stepped forward and retrieved his cloak. The butterfly was gone. The Bonpo stooped and picked something off the ground. It caught the late afternoon sunlight and reflected it with the bright glitter of a precious gem.

“Ah, ha,” Kira thought. “I know your secret.” He had heard of such things, of course. Every Sherpa child had heard of the magical abilities of the Bonpo holy men. But Kira had never seen such a transformation with his own eyes.

The old man slipped the new gem into his pouch with the others. Then he turned and continued down the trail.

Kira followed, walking quickly after the Bonpo. The man left the main trail, climbed up over a ridge, then followed a stream down into a dark valley. The sun was setting, but the full moon rose and Kira crouched behind a boulder by the trail and watched the Bonpo set his bundle down by the shore of a stream.

The old man gathered twigs and lit a small fire. It was cold by the trail and Kira pulled his wool robe more closely around himself. The old man made tea and dined on tsampa porridge. At last, as Kira shivered, the Bonpo pulled his robe around him, kicked off his sandals, and went to sleep.

Kira waited, watching the fire burn down to coals. When the moon was high overhead and the stars glittered like the jewels that Kira desired, he

slipped quietly into the Bonpo's camp. One corner of the magic cloak stuck out of the bundle that was serving as the old man's pillow.

Kira hesitated. The Bonpo was snoring softly, but Kira thought he saw the glitter of the man's eye in the moonlight. He sat for a moment and thought about what he was about to do. It was wrong to steal the cloak—but he had to have it to fulfill his destiny and go to court. And surely the old man had gems enough.

Kira leaned forward, and took hold of the corner of the cloak. The holy man's breathing was soft and even. Kira pulled slowly and carefully. The gray cloak came easily from the bundle into Kira's hands, as if it were meant to be his. The Bonpo continued sleeping, undisturbed.

Kira clutched the cloak, then hurried away down the trail. Before daybreak, he wanted to put as much distance as possible between himself and the Bonpo. The moon was full and the trail was lit as bright as day. He had always tired when his father had taken him on trading expeditions, but now he felt tireless, climbing ridges, walking down the valleys, passing through sleeping villages and past barking dogs. He was sorry that he could not say goodbye to his mother and father, but he knew that it was more important to hurry toward his destiny. He could send them a message from court.

Kira walked all night, clutching the cloak and thinking of how he would appear in court. First he would go to a silversmith and have some of his fine gems set in jewelry to adorn his plain black wool robe. The simple black robe and the brilliant gems would make a striking combination, he thought. The rest of the gems he would present to the King—handfuls of rubies and emeralds and turquoise and amber. He would bow before the King and the King, he was certain, would raise him up and make him a valued counselor. The sun rose, and Kira continued walking, happy with his dreams of the future.

He had long since left the Khumbu Valley, heading down into the lowlands. The trail led along the edge of a terraced field. On one side, millet reached his knees—green stalks topped with clusters of unripe grain, each cluster as tight as a clenched fist. On the other side, the ground dropped away to a terrace six feet below.

Three small white butterflies, each one no bigger than the tip of his thumb, fluttered among the millet stalks. Kira stopped in the trail, ready to try his magic cloak at last. He shook the cloak three times just as the Bonpo had. Quickly, he tossed it over the butterflies. When he picked up the cloak he found, among the crushed millet stalks, three white opals, iridescent in the morning light.

Kira plucked the gems from the dirt and held them in his hand. Each one was perfect, smooth and beautiful. He slipped the stones into the pouch at his belt and continued on the trail.

A small stream flowed down from the top of the ridge and ran alongside the trail. Brightly colored dragonflies darted over the water. Kira threw the gray cloak and the insects became rubies, emeralds, sapphires. A sweep of the cloak and an orange-and-black butterfly fell to the earth as a polished tiger's eye agate. Bright golden butterflies became bits of polished amber.

How many gems did he need? It seemed to Kira that he could not have too many. He filled the pouch at his belt to overflowing, but he kept seeing one more beautiful butterfly, one more elegant dragonfly. He was weary—exhausted from lack of sleep and hours of walking—and he staggered like a drunken man. The trail was precarious—a line of wide stones between two fields. More than once, he almost fell into the lower terrace, six feet below the trail. On each occasion, he recovered his balance at the last minute.

A beautiful butterfly flitted past him. Wings of midnight black marked with steely blue; a wing span as wide as his hand was long. He could not imagine what gem such a butterfly would become. He had to have it.

The butterfly fluttered across the path and then, as he prepared to toss the cloak, flew away over the terraced field. He shook the cloak three times and turned toward the insect, determined to capture it. As he turned, his foot slid off the trail and he fell. His arms flailed as he tried to keep his balance, and the cloak slipped from his grasp. He twisted, falling over backward, his arms extended. And the cloak floated down over him, enveloping him from head to foot.

The Bonpo sorcerer, perched on a rock wall on the edge of the field, watched it all. He had taken the form of a raven and followed Kira along the trail. The bird's croaking sounded very much like human laughter. A few minutes later, the Bonpo flew over the field, swooping low to pick up the cloak. Then he headed north, having other business to attend to.

Later that day, the farmer found a statue in his field, half sunk in the moist soil. The statue was a handsome young man, carved from a single piece of onyx. The eyes were polished agate, rich and brown. The lips were coral, the teeth were pearl. The figure held out its hands, as if reaching for something that was infinitely desirable.

The farmer—with the aid of a water buffalo and two neighbors—lifted the statue from the field. Later, he sold it to a passing trader who, recognizing its value, transported it to Kathmandu, where he sold it to a merchant who presented it to the King. The King, who was an admirer of art as well as a collector of precious gems, accepted the gift with great praise for its workmanship.

"What can you tell me about the artist?" the King asked. "Or about the young man who modeled for the statue?"

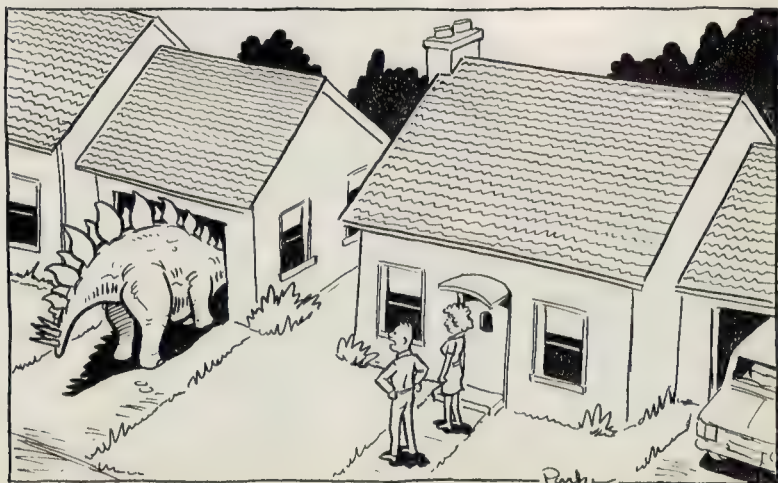
The merchant bowed his head, grateful that the King was pleased with

this gift. But he could say nothing of its origin. He told the King that the statue came to him from a trader and he did not know where the artist or the model lived.

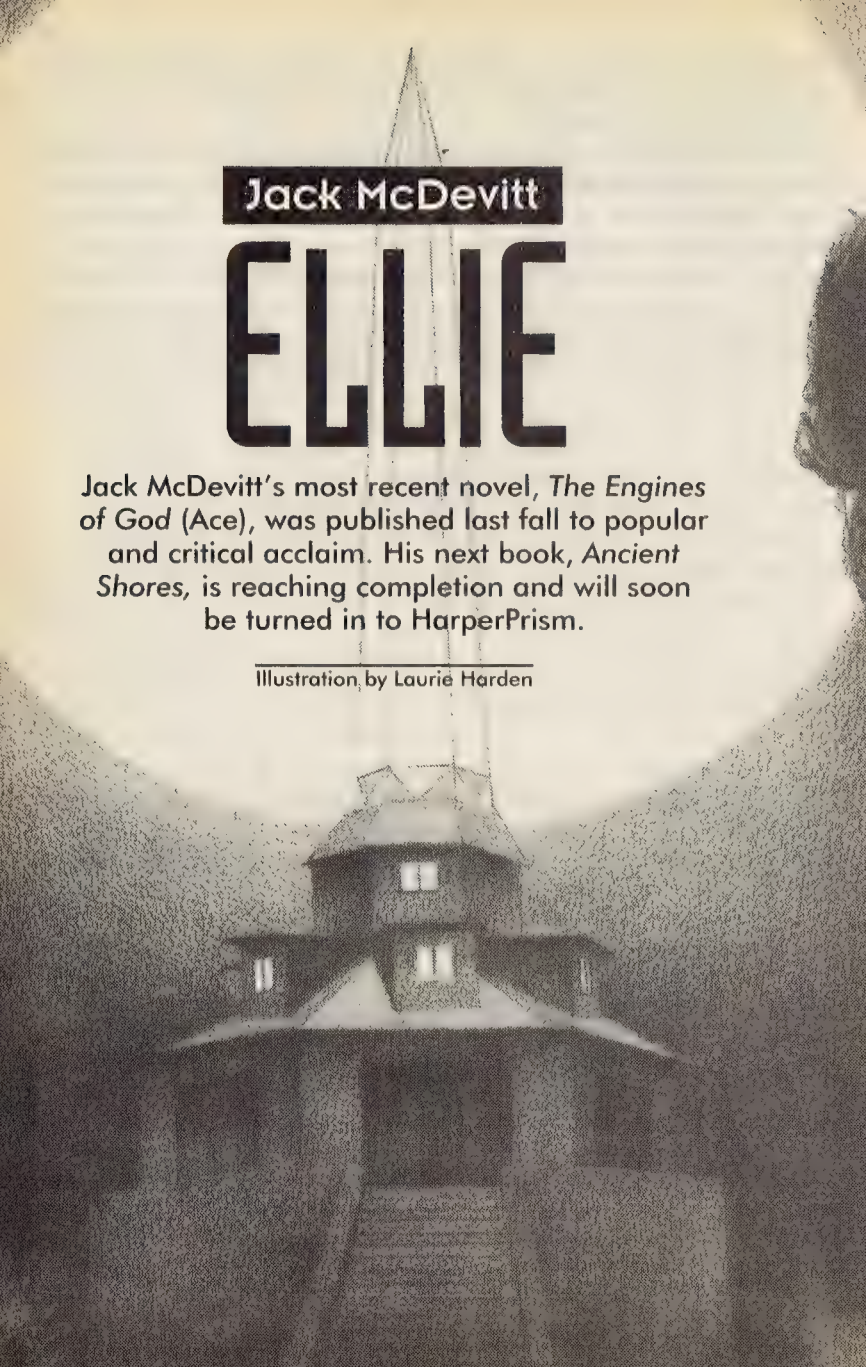
"That's a pity," the King said, still studying the statue. "This young man has such a look of longing in his eyes. Such eagerness and desperation. I wonder what he wants so badly. Whatever it is, if it were in my power, I would grant it to him."

"Your majesty is generous," the merchant murmured. "You are too kind."

The King placed the statue in the throne room, a place of great honor. And all who came to petition the King remarked on its lifelike quality. ●



"GREAT! NOW WE HAVE TO GET A **STEGOSAURUS!**"



Jack McDevitt

ELLIE

Jack McDevitt's most recent novel, *The Engines of God* (Ace), was published last fall to popular and critical acclaim. His next book, *Ancient Shores*, is reaching completion and will soon be turned in to HarperPrism.

Illustration by Laurie Harden



If the lights at Bolton's Tower go out, the devil gets loose. At least, that was the story. The idea spooked me when I was a kid, and even years later on those rare occasions when I traveled into its general neighborhood, which was well north on the Great Plains, far off the trading routes.

The Tower put out a lot of light, so much that it could be seen from the Pegborn-Forks road. In a world illuminated mostly by kerosene and candles, it was unique, and it was easy to believe there might be a supernatural force at work.

I'd been away from the Dakotas for *years*, and had long since forgotten about the thing, when the press of business and a series of unseasonal storms drove me north into my old home grounds. The weather had been overcast for a week, had cleared off during the course of a long cold afternoon, and when the sun went down, Bolton's star rose in the east. I knew it immediately for what it was, and I knew I was close.

There's something else odd about Bolton's Tower.

It's just inside the southern rim of a long, curving ridge. The ridge isn't high. It seldom exceeds thirty feet, and sometimes it's no more than a ripple in the grass. But it's a strange ridge: if you follow it far enough, you discover it forms a *perfect circle*. You can't see that from any single place; the ring is too big. More than sixty miles around. I've heard tent preachers explain that the circle symbolizes God, because it's endless, and cannot be improved on. Just the thing to imprison Satan, they add darkly.

I crossed the ridge on foot, leading my mount. Snow was beginning to fall again, and the wind was picking up. The Tower rose out of a cluster of dark, weatherbeaten buildings and a screen of trees. These structures were low and flat, dreary boxes, some made of clapboard and others of brick. Their windows were gone; their doors hung on broken hinges or were missing altogether. A roof had blown off one, another lay partly demolished by a fallen tree. A small barn, set to one side, had been kept in reasonable repair, and I heard horses moving within as I drew near.

The Tower soared above the ruin, seven stories of bone-white granite and thick glass. Porches and bays and arches disconnected it from the prairie, as if it belonged to a less mundane reality. The roof melted into banks of curved glass panels capped by a crystal spire. Its lines whispered of lost power and abandoned dreams, passion frozen in stone.

I released the straps on my crossbow, and loosened it in its sheath.

Several windows on the second and third floors were illuminated. The Tower lights themselves, red and white signature beams, blazed into the murky night.

In the windows, no one moved.

The base of the Tower culminated in a broad terrace surrounded by a

low wall, elevated from the road by about twenty wide stone steps. The steps were flanked by dead hedge.

I rode past, down a grass-covered street, and dismounted in front of the barn. Max made some noises to indicate he was glad the day was over. I hoped he was right.

The barn had sliding doors. I opened one and we went inside. The other horses (there were three) moved restlessly in their stalls. The place smelled of them, of course, warm and pungent. I tied Max up, but did not remove his saddle. Just in case. I debated whether to take the cross-bow, but in the end left it, on the grounds that guests arriving with weapons were a lot more likely to be turned away.

Wind shook the building, and snow rattled against it like sleet. On the plains, the stuff has the consistency of rock salt. And when the wind is up the way it was that night, it can beat you down pretty good. I burrowed into my coat, pulled my hat low to protect my eyes, and strode back out into the storm.

I climbed the steps and crossed the terrace. There was a statue of someone out there, in an old dried-up fountain, a rumpled woman in Old World clothes, with the name *Margaret Hanbury*, and the inscription: *FROM THIS NARROW SPACE, WE TOUCH THE INFINITE.*

Six heavy glass doors guarded the entrance. I looked up at the Tower, cold and remote, its aspect growing and shifting in the changing texture of its spectral lights.

The doors had no give. Beyond them lay a dark lobby. I could see furniture, wall-hangings, a stairway illuminated by a glow from above. I banged on the glass and cried out.

For several minutes nothing happened. I tried again, and was thinking about moving in with the horses when the terrace lit up. A man descended the staircase, came to a stop midway across the lobby, and stood for a considerable time without moving further. A gesture of impatience did nothing to hurry him. Finally, he came forward, threw a bolt, and pulled the door open.

"Good evening," he said, in a rich baritone. "Sorry to leave you standing out here, but I'm inclined to be careful these days."

He was a half-foot taller than I, with lean, almost cruel features, and dark intelligent eyes. His buckskin jacket covered a white denim shirt. His black trousers were creased. He was a dark and somber man, and his manner suggested he was accustomed to command. He wore a neatly-trimmed beard, and his hair was black and thick.

"Thank you," I said, moving past him. It was good to be in out of the wind.

More lights went on. The interior was quite long, perhaps two hundred feet, although its width was little more than that of an ordinary room.

It was decorated with Indian art, totems, weavings, pottery, and a few oils depicting teepees by sunset and young braves in canoes. There were numerous chairs, but no effort had been made to match their styles. There were rattans, fabric of a half-dozen different colors, and a wooden bench. Several small tables were distributed throughout the space.

He extended a hand. "This is not a good day to be on the road."

"No," I said. "It's downright brisk out there." I shook the snow off my shoulders. "I'm Jeff Quincey."

"Edward Marsh. Where are you headed, Quincey?" His voice changed texture, not precisely softening, but rather growing consciously more amiable.

"I'm bound for the Forks. I'd expected to spend the night in Sandywater, but I got off to a late start this morning. And the weather—" I thrust a hand in the general direction of the outside.

He nodded. Snow whipped across the glass. "You'll want to stay the night with us, of course."

"If it's no trouble, I'd be grateful."

"None at all. We don't get many visitors here." He turned on his heel and led the way to the staircase.

On the second floor, carpeted corridors ran off in three directions. The carpet was frayed and, in some places, threadbare. Closed doors marched uniformly along the walls. "This way," Marsh said, striding off into the right hand corridor. "What business are you in, Quincey?"

"I'm a trader. And an occasional agent for Overland."

He nodded approvingly. "It's the traders that'll open up this country," he said.

Halfway down the hall, the place began to look lived-in. The gray walls gave way to dark-stained paneling, rugs were thrown over the weary carpet, and someone had hung a series of prints. The prints alternated between abstracts and sketches of Old World city scenes. One depicted Chicago, crowded with traffic; another, New York at night; and a third, a Parisian sidewalk cafe. "I've been there," I told him.

"Where?"

"Chicago."

"Really?" He glanced at the image. "Odd, all the times I've walked by this, and I don't think I ever really looked at it." He pushed his hands deep into his jacket pockets. "Why?"

Why indeed? It had been one of the more oppressive experiences of my life, wandering through those gray, cold canyons. Climbing past the rusting metal that filled its ravine streets, looking up at thousands of empty windows, and knowing what lay mouldering behind them. "I was hired to help with a survey. An historical project."

He nodded. "I do believe you're a man after my own heart, Quincey."

We entered a sitting room half-lit by a low fire. Several pieces of oversized upholstered furniture filled most of the available space. Crossbows and bison trophies were mounted in strategic locations, and a battered garrison hat hung on a peg. Yellowing books were stacked on wall-shelves, more than I'd seen in one place this side of Port Remote. Some appeared to be military histories. But there were also travel journals, and technical titles whose meaning escaped me, like *An Orderly Approach to Chaos*, and *The n-Particle*. That was old stuff, pre-Crash, and I wondered whether anyone now living really understood them.

He switched on an electric lamp, and motioned me to a chair. "I stay out of the cities," he said. "I don't like places where you can't see what's coming at you. Anyway—" he winked, "you never know when some of the concrete is going to let go."

He took glasses and a decanter from a cabinet. "Port?" he said.

"Yes. Fine."

"Good. We don't have much of a selection." He filled them and held one out for me. I took it, and we raised our glasses. "To the outside world," he said.

That was a strange toast. I glanced through the window and considered how long lay the plain beyond the gathering dark. "Cheers," I said.

We talked for a few moments of inconsequentials. How short the summer had been this year; the apparent withdrawal of the raiders who had harrassed stages and attacked settlements in the area ("too cold for them here in winter," offered Marsh); the rumor that a firearms manufacturing plant had been set up in Nevada, and was now turning out weapons and ammunition in quantity. We refilled the glasses, but the camaraderie that should have emerged from our situation remained at bay. My host was friendly enough, God knew, and solicitous for my welfare. But I sensed a barrier, and a lack of warmth in his smile. "You're in time for dinner," he said at last. "We'll eat shortly." He studied me thoughtfully. "If you like, I believe we can replenish your wardrobe."

Marsh enjoyed his role as host, but I suspected he would have been uncomfortable in my position, as suppliant. "Thank you," I said. "You're very kind." And I thought of Max. "I'd like to take some water out to my horse."

"Is he in the barn?"

"Yes."

"I'll take care of it. Meantime, if you're ready, let's look at your quarters."

He provided me with a spacious and, by prairie standards, luxurious room on the third floor. A big double bed stood in its center, with pillows piled high and a quilt thrown over. It lacked a fireplace, but there was

a steady flow of warm air from a vent. The atmosphere was masculine: varnished walls, a mounted deer's head, an antique pistol over the bed, and a military ensign bearing rifles and bugles and the numeral *IV* by the door. A small desk had been placed near the window. An ancient dictionary lay on the desk, and a battered copy of *Pierce's Travels Through the Dakotas* on a side table.

I threw off my clothes, leaving them in a pile on the floor, and retreated into a tan-tiled bathroom. I showered in glorious hot water, towed off, and tried the garments my host had provided. They were a size large, but they were clean and smelled faintly of pine. I washed my own clothes and hung them to dry.

The smell of steak and potatoes woke up my appetite. I wandered downstairs, pausing to look through a staircase window at the rooftop lights. They blazed through the rushing snow. What a prodigious waste of power it all was. I wondered how they were able to manage it?

Marsh must have heard me coming: he was waiting when I arrived on the second floor. "I hope you feel better, Quincey," he said.

I did. Very much so.

We returned to the room in which we had talked earlier. A pot of coffee had been placed on a table. He poured, and we sat down by the fire. We were barely settled when he looked up, past my shoulder. "Eleanor," he said, "this is Mr. Quincey."

I rose and turned, and was astonished. So, I might add, was Eleanor. "Jeff," she said, and I watched dismay, relief, fear, affection, and everything between, ripple through her expression.

And I—my God, it was *Ellie Randall*.

For those few seconds, I could only stare.

Probably, no one ever quite recovers from the first big passion. Ellie had been mine. We'd had three months together when we were both growing up in the Forks. And that was all there was. She lost interest and walked out of my life. I didn't even have the consolation of losing her to someone else. Shortly after that I left the Forks, and when I went back ten years later she was gone and nobody remembered where.

So I stood gaping back, shackled by the old resentment, breathless again. She was as gorgeous as I remembered her. And that too shook me: I think in some dark corner of the mind, I'd hoped eventually to come across her and discover that the near-supernatural creature of my twentieth year had been a figment of adolescent daydreaming. That, to a mature adult, she would really have been quite ordinary. Perhaps even a trifle dull. That I'd been lucky to have got away.

But in that darkened room she seemed composed of firelight and shifting shadows, more spirit than flesh. (Although the flesh was not to be overlooked.) Her familiar features were classic, dark, and now that she'd

recovered from her initial shock, amused. She shook her head in sheer pleasure and her black hair swirled across her shoulders. Delight filled her eyes, and I felt the entire room, the chairs, the lamps, the fire, and certainly me, come erect.

I knew already I would lie alone on the plains during years to come and replay this meeting. From that moment, I developed a loathing for Edward Marsh that nothing could ever efface.

We embraced, a fleeting, phantasmagoric thing, her lips brushing my cheek, her shoulders vibrant and alive in my hands. Her eyes touched mine. "It really *is* you, isn't it? What have you been doing all these years, Jeff?"

Her smile melted me into my socks, and I was twenty years old again. I didn't trust my voice, so I grinned, foolishly no doubt, retreated to my coffee, and mumbled something about traveling extensively.

Marsh moved into the gap. "Well, *that's* interesting," he said, eyes brightening. "How odd that you two would know each other."

"We grew up together. Jeff and I were good friends for a long time." Her dark eyes settled on me. "It *is* good to see you again, Jeff." She smiled again. "Listen, I have to finish dinner. But we have a lot to talk about."

She swung around and trooped out. And the room sank back into the normal flow of time.

"She hasn't changed," I told Marsh. He was watching me with interest, and I knew what he was wondering. The rational tack, of course, was to change the subject. "What kind of installation was this originally?" I asked, heading in the first direction that suggested itself.

He took a long breath and examined his coffee. "A research facility of some sort," he said. "Ellie can tell you more about it than I can."

"Oh?"

He shrugged. "Yes," he said, "she's closer to the history of the place than I am." There was something dismissive in his tone, as if there were more important matters to consider. His eyes glided over me.

"Will there be others at dinner?" I asked.

"No," he said distractedly. "There is no one else here."

I looked down at my shirt.

"It belonged to *Ellie's* brother-in-law, actually," he said. "He left a few years ago."

Ellie's *brother-in-law*? Why not "my brother"?

"Where is he now?" I asked conversationally.

"We don't know. Occasionally, someone comes by with a letter from him. Last we heard, he was in Zona."

I gradually received the impression, one that was reinforced through the evening, that he was measuring me, that he was involved in a calculation and that I was somehow a variable.

Marsh had traveled widely. He explained that he had been born in Canada, in a town not far from Ottawa. "We all grew up in the shadows of that enormous wreck," he explained. "And I've stayed away from the ruins since. Don't like them." He shook his head. "No sir. Don't like them one bit."

"I know what you mean," I said, not sure at all that I did.

"We're headed backward, Quincey. All of us. Still losing ground even while you and I sit here. And there's nothing to be done about it." He raised his arms in a sweeping gesture that took in the walls, or maybe the world. "They're all yellow now," he said. "Fading. And when they're gone, what we might have been will probably go with them."

I realized finally he was referring to his books, marshaled around the room like a military guard. I repressed a shrug. I've never read a book, and am barely able to manage trade documents, if the truth be known. "I'm not so sure," I said. "Life is hard, but it could be worse. I mean, there's always food and drink, if a man's willing to work. And women enough, God knows." I wished Ellie had been there to hear that. I hoped he would repeat it to her, and she would understand that I had been having a very fine time on my own, thank you.

A few minutes later, Ellie announced that dinner was ready. We retired to the dining room, and she flashed me another big smile. I thought I saw in it a glint of regret. I applied the construction most favorable to myself, and attacked dinner with a sense of good cheer.

The table would have supported dinner for ten. We ate by candlelight, warmed by two fireplaces.

Dinner consisted of steak and potatoes and green beans and buttered corn and hot rolls. Marsh broke out a decanter and filled the glasses, and we toasted "old friends." *His* proposal.

I was still wondering about the nature of the facility. "What," I asked, "is the ring? The ring-shaped ridge?"

Ellie tried her drink, and obviously approved. "They used this place to break into atoms," she said. "They were trying to discover what matter really is."

"Why?" I asked.

"I'm not entirely sure."

"Did they leave records?"

"In a way. They wrote their results into computer banks."

"Oh." The computers don't work anymore.

She sliced off a piece of steak, turned it on her fork, and slid it between her lips. "Not bad," she said, eyes gleaming. "Given time, maybe we'll figure out how to fix them."

We ate quietly for a few minutes. "How do you come to own a place like the Tower?" I asked Marsh.

"I don't own it," he said. "It's Ellie's, actually."

She broke off a piece of bread. "I married into it. Two or three years after you left, I married Corey Bolton. His family had been here for generations." She propped her chin on her fist and looked right through me. "Corey died in a raid several years later. After that his brothers cleared out, and I more or less inherited the place."

"It's *big*," I said.

She smiled. "You don't know the half of it. Most of the complex is underground."

Marsh smiled reflexively. He looked uneasy.

I expected him to say something. But he only patted his mouth with his napkin. The silence stretched out.

"I wonder what *does* lie inside atoms?" I said.

"Energy," said Marsh.

"Yes." Ellie of course *had* changed. The buoyancy of the adolescent had given way to cool dignity. The eyes, which had been unabashedly playful, glowed now with mystery and intelligence. The sense of what I had lost began to overwhelm me, and I was sorry I had stumbled into the place. Better a cold night on the plain than this—"But there's obviously more to it than that."

"And the ridge?" I asked again.

"Oh. It's a tunnel. We can reach it from here, actually. They fired atoms, or parts of atoms, I'm not sure which, through it. When they collided, they broke apart, and it was possible to see what was inside."

"It's hard to believe," I said, "that anyone could ever do that."

"So." She announced the subject change with her tone. "What have *you* been doing since you left the Forks, Jeff?" She touched a wall panel and Mozart filled the room. We talked about greenhouses (the Tower had *two*), and the source of their power (solar), and Marsh's trip to the Pacific, and how Chicago looks from offshore.

I learned that Marsh had been a colonel with irregulars formed to defend a group of Minnesota settlements. That Ellie was trying to pull together a comprehensive account of pre-Crash activities at the Tower, that the trail seemed to lead to Minneapolis, and that eventually she would make the trip. Ellie's comment to that effect ignited the Colonel's disapproval, and I understood that I had blundered into an old argument. "Too dangerous," he said, dismissing the matter.

When we'd finished, he insisted on clearing the table, and carrying the dishes into the kitchen. I was impressed by the manner in which he stayed with her and made himself useful. But I noticed also, on several occasions throughout the evening, silent exchanges took place between them. Was she reassuring him about our relationship? I suspected so,

and was pleased that he might, even momentarily, consider me a potential rival.

In all, it was a delicious and entertaining evening. I was sorry to see it end.

The snow had stopped falling, and the sky had cleared. But the wind had lost none of its force, and it drove the loose snow across the landscape.

The clothes I'd washed were still damp. I waited, listening for the last footsteps to come upstairs, and then I went down and arranged my garments in front of the fire. I threw an extra log on, and sank into a chair in front of the blaze. It was warm and soul-satisfying. And it was not long before sleep overtook me.

I dreamt of her that night, as I had on other nights. And, as was the usual climax to these nocturnal reunions, I awoke depressed with the weight of her loss. I sat suddenly recalled to my waking state, staring at the fire, which was now little more than embers, aware of the wind and sounds deep in the belly of the building and the flow of moonlight through the windows.

And I realized I was not alone.

A patch of darkness disconnected itself and came forward.

Ellie.

"Hello," I said.

She wore a heavy woolen robe, drawn up around the neck, her black hair thrown over the collar. I could not see her expression, but the glow from the window touched her eyes. "Hi, Jeff," she said. "Is there anything wrong with your room?"

For a wild moment, I entertained the notion she had just come from there. "No," I said. I pointed at the clothes strung by the fire. "I just got too comfortable here. There's no problem."

After a brief silence, she said, "I didn't expect to see you again."

I had got up, but she waved me back into my seat, and stirred the fire. "You have a lovely home," I said. "You've done well."

She nodded. The robe was frayed, oversized. But it didn't matter: she was breathtakingly beautiful. "Corey was *good*. I couldn't have asked for more."

"I'm sorry you lost him," I said.

"Thanks. It's a long time ago now." She slipped into an adjoining chair. "Jeff, I'm glad to find you here. I was afraid I wouldn't really get a chance to talk to you."

I was prodding myself to be generous, to avoid letting any of the old anger show. But it was hard. "We don't really have much to talk about," I said.

"Yes, we do." She gazed at me steadily, and I imagined I could see sparks reflected in her eyes. "I can't change what happened between us. I can't even say that I *would*, if I could. I loved Corey, and I wouldn't have missed my years with him for anything." She touched my forearm, just her fingertips, but the effect was electric. "You understand what I'm telling you?"

"Yes," I said. But I had no idea.

She stared past my shoulder. "You know that Ed is not my husband."

"I'd guessed as much."

"When we were attacked, when Corey was killed, Ed was the one who came to the rescue. He rode in with a detachment from Sandybrook and personally killed two of the sons of bitches."

"And afterward," I said, "he stayed."

"Not immediately. Corey's brothers couldn't take it anymore out here and they left. When that happened, he tried to persuade me to leave, too."

"Why didn't you?"

She took a deep breath. "This is my *home*." But her eyes looked away. "When I wouldn't leave, he came out. Used to sleep in here. Like you. Eventually—" She shrugged.

"This place is dangerous. For two people."

"We have defenses. Corey wouldn't have been killed if we hadn't been surprised." She shook her head, maybe reassuring herself. "No. I'll never leave here, Jeff. I *love* this place."

We sat quiet.

"But I did want you to know," she said, "that I've never been able to forget you."

It was nice to hear.

The room got very quiet. It occurred to me that Marsh might be standing within earshot. Marsh, who had killed two raiders while riding to the rescue. "I'm happy to know," I said.

"I know what you're thinking," she said, mischievously.

"What am I thinking?"

"He won't care," she said. "Ed doesn't care about *me*."

That made no sense. He didn't own the property. If he had no feelings for her, why on earth would he stay in this godforsaken place? I replayed the evening. The way Marsh had introduced her. The way he'd responded when he had discovered we'd known each other. The way he talked to her. "I don't believe it," I said.

"Nevertheless it's true. He feels trapped here, and he blames me." She pushed up out of her chair. "He stays out of a sense of duty."

Her grip tightened on my hand, and a tear ran down her cheek. It was a moment I'd contemplated many times when I was younger. Ellie perhaps

realizing at last what she had lost. Asking me to forgive. In my imagination, the moment had always seemed delicious. But when it came, I took no pleasure in it.

"You never married," she said.

"I never stayed in one place long enough. Anyway, no one ever seemed much interested."

"Women are such damn fools," she said. She stared at me for a long moment, and, without saying another word, got out of her chair, pressed her lips against my cheek, and left the room.

I went to bed. I did not sleep well the rest of the night, and I was tempted to clear out. But that might have raised questions and embarrassed Ellie. So I determined to get through breakfast, and leave as quickly as I reasonably could.

Bacon and coffee were already on when I started down. I poked my head into the dining room first, saw no one, and made for the kitchen. Ellie was there, manning an electric stove. But I saw immediately that something was wrong. She looked tired, and the *joie-de-vivre* of the previous day had been replaced with knife-edged intensity. "Good morning," she said. Her tone was cordial, but not warm.

She wore a white sweater open at the throat, and a knee-length knit skirt. Her hair was brushed back, revealing pale, drawn features. "You okay?" I asked.

"I'm fine." She delivered a dispirited smile. "How do you like your eggs?"

"Medium well." I looked at her. "What's wrong?"

She poked at the bacon. "He's gone, Jeff."

"Gone? Ed?"

"Yes."

"Where?"

"Out. Skedaddled. Left for other places."

"My God. What happened?"

She turned her attention to the eggs, scooping at them and wiping her eyes with the backs of her hands. I pulled the pan from the burner and set it down where things wouldn't burn, and then I caught her up: "Talk to me," I said.

"He left before dawn."

"Did he think something happened between us?"

"No," she said. "No. Nothing like that."

"What makes you think he's not coming back?"

"I *know* he's not coming back." She shook her head. "Listen, I'll be okay. Best thing is for you to eat and head out."

"Tell me why," I said.

"I've already told you. He felt trapped here. I warned him what it would be like, but he wouldn't listen, or didn't really understand. When you came, last night, when he saw that we had been friends, maybe *more* than friends, he saw his chance."

"To *bolt*?"

She nodded.

"Knowing that I wouldn't leave you here alone?"

"I'm sure that's what he thought."

"A creep with a conscience." I lowered her into a chair.

"That's not true," she said. "He waited. He stayed for *years*. Most men would have just walked out. Jeff, he never committed to this."

"Sure he did," I said. "When he came out here and started sleeping in the living room, when he moved in, he made a commitment." But I could see it hurt her. She wanted to think well of the son of a bitch, so I let it go.

We abandoned the kitchen, left breakfast in ruins, and wandered into the room with the fireplaces.

"Okay," I said. "What happens now?"

She shrugged. "I'll manage."

"You can't stay here alone," I said.

"Why not?"

"*Alone*? Rattling around in this place?"

"It's my home."

"It will be a prison. Close it up and come back with me. To the Forks. It'll be safe for a while. Give yourself a chance to get away from it."

"No." Her voice caught. "I can't leave here."

"Sure you can. Just make up your mind and do it."

She nodded and took a long breath. "Maybe you're right," she said. "Maybe it *is* time to let go."

"Good," I said. I saw possibilities for myself. "Listen, we'll—"

"—Take my chances—." She was beginning to look wild. "There's no reason *I* should have to be buried here—"

"None at all," I said.

"If it gets loose, it gets loose. I mean, nobody else cares, do they?"

"Right," I said. "If *what* gets loose?"

She looked at me a long time. "Maybe you should know what's in the basement."

I didn't like the sound of that.

I tried to get her to explain, but she only shook her head. "I'll show it to you," she said.

So I followed her down to the lobby. Outside, the snow cover ran unbroken to the horizon. I looked at the Native American display. "Corey's idea," she said. "He thought it provided a counterpoint to the technology."

We went downstairs, down four more levels in fact, into the bowels of

the building. At each floor I paused and looked along the corridors, which were dark, illuminated only by the lights in the stairway area. The passageways might have gone on forever. "How big is this place?" I asked.

"Big," she said. "Most of it's underground. Not counting the tunnel." And, as we got lower, I watched her spirits revive. "I think you're right, Jeff. It is time for me to get out. The hell with it."

"I agree." I put an arm around her and squeezed, and her body was loose and pliable, the way a woman is when she's ready.

"Jeff," she said, "I meant what I said last night."

During the time we had known one another, I had never told her how I felt. Now, deep below the Tower, I embraced her, and held her face in my hands, and kissed her. Tears rolled again, and when we separated, my cheeks were wet. "Ellie," I said, "for better or worse, I love you. Always have. There has never been a moment when I would not have traded everything I had for you."

She shook her head. No. "You'd better see what you're getting into first before you say any more."

We turned on lights and proceeded down a long corridor, past more closed rooms. "These were laboratories," she said, "and storage rooms, and libraries."

The floor was dusty. Walls were bare and filmed with dirt. The doors were marked with the letter designator "D," and numbered in sequence, odd on the left, even on the right. There had been carpeting, I believe, at one time. But it was only bare, rotted wood underfoot now.

"Doesn't look as if you come down here very much," I joked.

She pointed at the floor, and I saw footprints in the dust. "Every day," she said.

She threw open a door and stepped back. I walked past her into the dark.

I could not immediately make out the dimensions of the room, or its general configuration. But ahead, a blue glow flickered and wavered and crackled. Lights came on. The room was quite large, maybe a hundred feet long. Tables and chairs were scattered everywhere, and the kind of antique equipment that turns up sometimes in ruins was piled high against both side walls.

The blue glow was on the other side of a thick smoked window. The window was at eye level, about thirty feet long, and a foot high. She watched me. I crossed to the glass and looked in.

A luminous, glowing cylinder floated in the air. It was a foot off the floor, and it extended almost to the ceiling. Thousands of tiny lights danced and swirled within its folds. It reminded me of a Christmas tree the Sioux had raised outside Sunset City a couple of years ago. "What is it?" I asked.

"The devil," she said softly.

A chill worked its way up my back. "What do you mean?"

"It's a result of the research they did here. A by-product. Something that wasn't supposed to happen. Jeff, they *knew* there was a possibility things might go wrong. But the bastards went ahead anyway—"

"Wait," I said. "Slow down. Went ahead with what?"

"With what we were talking about last night. Smashing atoms. Jeff, this must have been a state of the art laboratory. Because they were able to do things here they had not done before." She moved close to me, and I touched her hair. "Do you know what protons are?"

"Yeah. Sort of. They're made of atoms."

"Other way around," she said. "The thing about protons is that they are extremely stable. Protons are the basic building blocks of matter. There is *nothing* more stable than a proton. Or at least, there used to be nothing—"

"I'm not following this."

"The people who worked here knew there was a possibility they might produce an element that would *be* more stable." Her voice was rising, becoming breathless. "And they also knew that if it actually happened, if they actually produced such an element, it would *destabilize* any proton it came into contact with."

"Which means what?"

"They'd lose the lab." I was still watching the thing, fascinated. It seemed to be rotating slowly, although the lights moved independently at different speeds, and some even rotated against the direction of turn. The effect was soothing. "In fact," she continued, "they were afraid of losing the Dakotas."

"Why would they make anything like that?" I asked.

"They didn't set out to *make* it. They thought it was *possible*. A by-product. But the chances seemed remote, and I guess the research was important, so they went ahead."

"And it happened," I said. I still couldn't see the problem. After all, it was obvious that nothing of an untoward nature had occurred.

"Yes. Fortunately, they took steps to protect themselves in case there was an incident. They developed a defense. Something to contain it. If things went wrong."

"How?"

"You're looking at it. It's a magnetic field that plays off the new element. They called it Heisium."

"After its discoverer?"

"Yes."

"So it's contained. What's the problem?"

She stood with her back to it, looking away. "What do you suppose would happen if the power failed here?"

"The lights would go out." And I understood. *The lights would go out.* "Isn't there a backup?"

"It's *on* the backup. Has been for almost two hundred years. The Crash took out their electrical source, and it's been running on the Tower's solar array ever since."

"Why do you come down here every day?"

"Check the gauges. Look around. Make sure everything's okay."

That shook me. "What do you do if it isn't?"

"Flip a circuit breaker. Tighten a connection. Rewire whatever." She inhaled. "*Somebody has to do this.*"

"Jesus."

"They kept this place manned for forty years. Then, after the Crash, the son of one of the people responsible for the original decision, Avery Bolton, the guy the Tower's named for, stayed on. And kept the place going. When he died, his daughter succeeded him. And brought her family. In one way or another, that family has been here ever since. Until Corey. And his brothers. His brothers weren't worth much, and now I'm all that's left." She shook her head. "Seen enough?"

"Ellie, do you *really* believe all this?"

"Yes," she said. We were sitting in the lobby. "Of course I believe it. Why else would I *be* here?"

"Things get twisted over a long time. Maybe they were wrong." Outside, the day was bright and cold and solid. "I just can't believe it."

"That's good," she said. "You should continue to think that. But I'm going to have to continue to assume that Corey knew what he was talking about."

"My God, Ellie, it's a *trap*."

She looked at me, and her eyes were wet. "Don't you think I *know* that?"

I looked up at an oil of a Sioux warrior on horseback, about to plunge a lance into a bison. "There's a way to settle it," I said.

She shook her head. "No."

"Ellie. We can shut it down. Nothing will happen."

"No. I won't consider it. And I want you to promise you won't do anything like that."

I hesitated.

"I want your word, Jeff. *Please.*"

"Okay," I said.

"Not ever. No matter what."

"Not ever." I looked at her. She looked fragile. Frightened. "No matter what."

She looked out across the snowfields. "It must be time to go."

"I won't leave you," I said.

That evening was a night to kill for. The consummation of love, denied over a lifetime, may be as close as you can come to the point of existence. I took her, and took her again, and went limp in her arms, and woke to more passion. Eventually the curtains got gray, and I made promises that she said she didn't want to hear, but I made them anyway. We had a magnificent breakfast, and made love in the room with the fireplaces.

Eventually, sometime around lunch, we went down and looked again at Bolton's devil. She took along a checklist, and explained the gauges and circuit breakers and pointed out where the critical wiring was, and where things might go wrong. Where they'd gone wrong in the past. "Just in case," she said. "Not that I expect you to get involved in this, but it's best if someone else knows."

She went down faithfully every day, and completed her rounds. "Edward hated to do this," she said. "He rarely came here."

She showed me where the alarms were throughout our living quarters, and how, if the power supply got low, the system automatically shunted everything into the storage batteries in the lab. "It's happened a couple of times when we've had consecutive weeks without sunlight."

"It must get cold," I said. The temperatures here dropped sometimes to forty below for a month at a time.

"We've got fireplaces," she said. "And we'll have each other."

It was all I needed to hear.

I stayed on, of course. And I did it with no regrets. I too came to feel the power of the thing in the lab. I accepted the burden voluntarily. And not without a sense of purpose, which, I knew, would ultimately bind us together more firmly than any mere vow could have.

We worried because the systems that maintained the magnetic bottle were ageing. Eventually, we knew, it would fail. But not, we hoped, in our lifetimes.

We took turns riding the buckboard over to Sandywater for supplies. Our rule was that someone was always available at the Tower. In case.

And one day, about three months after my arrival, she did not come back. When a second day had passed without word, I went after her. I tracked her as far as the town, where I found the buckboard. There was no sign of her. Jess Harper, who works for Overland, thought he'd seen her get into a wagon with a tall bearded man. "They rode west," he said. "I thought it was odd."

That was almost a year ago. I still make the rounds in the Tower, and

I still believe she'll come back. In the meantime, I check the gauges and occasionally throw a circuit breaker. The power in the living quarters shut down once, but I got through it okay. We got through it okay.

What I can't understand is how I could have been so wrong. I know who the bearded man was, and I try to tell myself that they must have been very desperate to get away. And I try to forgive them. Forgive *her*.

But it's not easy. Some nights when the moon is up, and the wind howls around the Tower, I wonder what they are doing, and whether she ever thinks about me. And occasionally, I am tempted to break my promise, and turn things off. Find out once and for all. ●

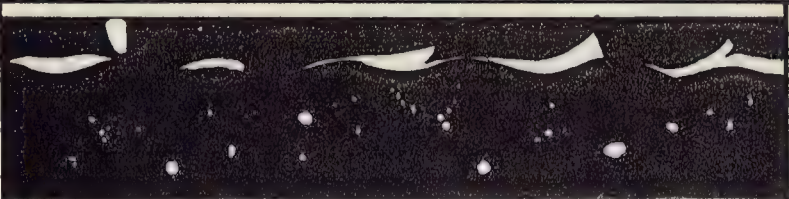


KITCHEN WITCH

William John Watkins

On the spice shelf over the sink,
despite a degree in Science,
is your plastic baggie full of wishbones,
gathered turkey by turkey over the holidays
and the diet days, when protein is king,
dried in sunlight, broken by moonlight,
your bag of wishes, awaiting hard times,
or crises, or just for providing
the long overdue accoutrements of success.

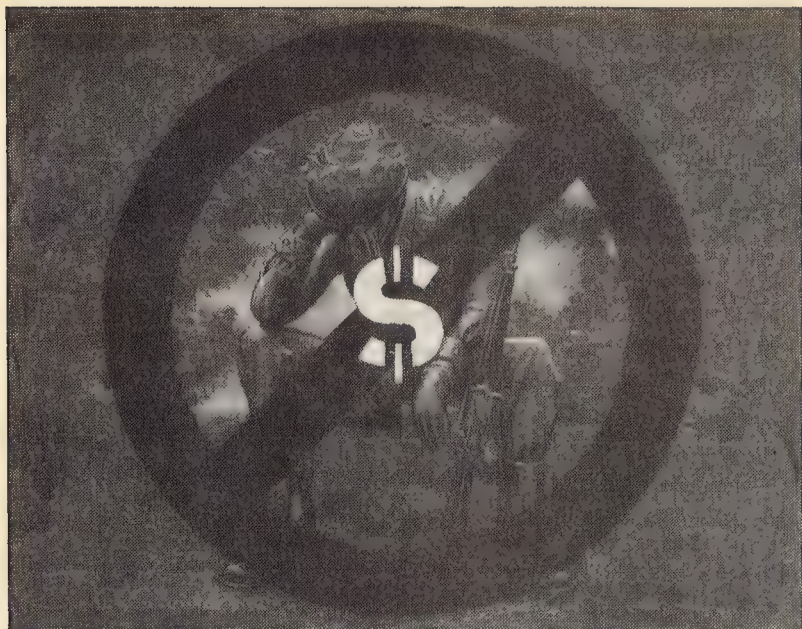




On the sill of the sunside window,
where you expect them to grow like plants,
are your pennies, in an open cup
shaped like a face that looks like mine,
and on the eating counter are the runes
for shrinking the food budget,
clipped from the colored newspaper section
where the steaks are all lean meat
and the strawberries, sweet as kisses,
are big as a man's head.

On the dish counter near the phone,
where you practice divination for the family
with which you have been cursed,
—mad mother, self-mutilating sister, bitchy nieces—
and heal them over distance
of wounds they will inflict on themselves again tomorrow,
is your list of tribulations I must undergo
—yard work, house repair, occult ingredients
to be hunted and brought back—
because all spells must be powered by sacrifice
and I am your thrall these thirty years
since you bewitched me.

Kitchen witch,
pagan goddess of heartbeats,
who could not love you,
love spell or no?



Paul Hellweg

PAY AS YOU GO

Since his first appearance in our pages (with the ghostly "Coke Boy" in May 1992), Paul Hellweg has had two nonfiction book sales and stories published in *Figment* and *Short Story Digest*. His latest tale takes an unsettling look at where our health care system could be heading.

Illustration by Alan M. Clark

Awiry little soldier popped up from his spider hole, shot John in the leg, then ducked back down. John thought himself rather unlucky to have been shot in the leg; the wiry little soldier thought himself rather unlucky to have missed John's stomach. Some days you just can't seem to please anyone.

Lieutenant Horace H. Harbach hid behind a tree as his men expended \$13,712 worth of ammunition shooting at nothing in particular; which is to say, the empty space the wiry little soldier had formerly occupied.

Lt. Harbach was thinking they had to get the little bastard. If not, he—Lieutenant Harbach—would have to forfeit \$312 a month for the next 44 months. The problem was that he had only a year-and-a-half to go on his enlistment.

Meanwhile, John was preoccupied with the gaping hole in his leg. He glanced at his hands; they were covered with blood that he would have preferred not to lose. At \$147 a pint, he wasn't sure if he could afford a transfusion. He groped for his field dressing, but his hands were shaking and he began to fear that he was slipping into shock. He reluctantly admitted that he needed help.

"Medic," John called, unenthusiastically.

"No damn way are we calling an air strike," Lieutenant Harbach said to his radioman. "What the hell do you think I am, made of gold or something?"

"Cash or charge?" the medic asked John.

"How much?" John said.

The medic fished out his battered copy of *Army Manual 1740-2A: Field Medical Expenses*. He thumbed through the pages.

"Here we go," he said. "Leg wound, left upper thigh. You can get a basic no-frills dressing for \$97.50. The deluxe job, complete with tourniquet and morphine, runs \$259.95. So, what'll it be?"

"Cash," John said. "Make it the no-frills."

"You got it, bro," the medic said, then hesitated. "Hey, man," he continued, "I got a recycled dressing I can let you have for half price."

"Sheeit," John muttered. He really didn't care all that much about the field dressing. He had bigger things on his mind: the medevac. Walking to the hospital was definitely out of the question.

Fifteen minutes later, the medevac landed amidst a twirling cloud of dust. Four of John's friends agreed to carry his litter for a case of beer each. John retrieved the bright gold credit card that he had secreted in his helmet liner for an emergency such as this. He offered it to the medevac crew chief.

Sunlight glinted off the dark visor of the crew chief's flight helmet. He carefully examined the card's little hologram of a flying eagle, then punched numbers into a portable credit-checker.

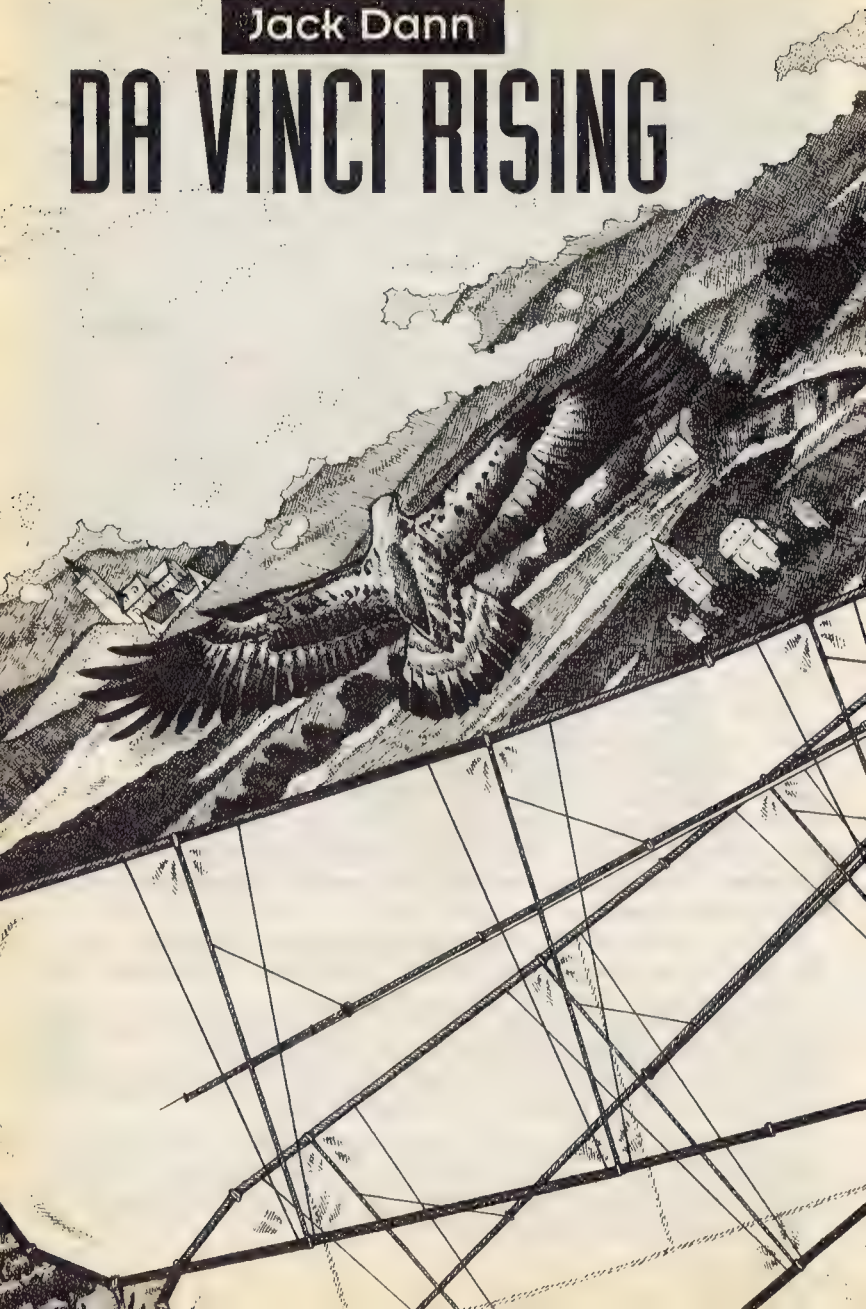
He handed the card back to John. "Sorry, friend," he said, "you're over your limit. You got fifteen hundred? Cash, no checks."

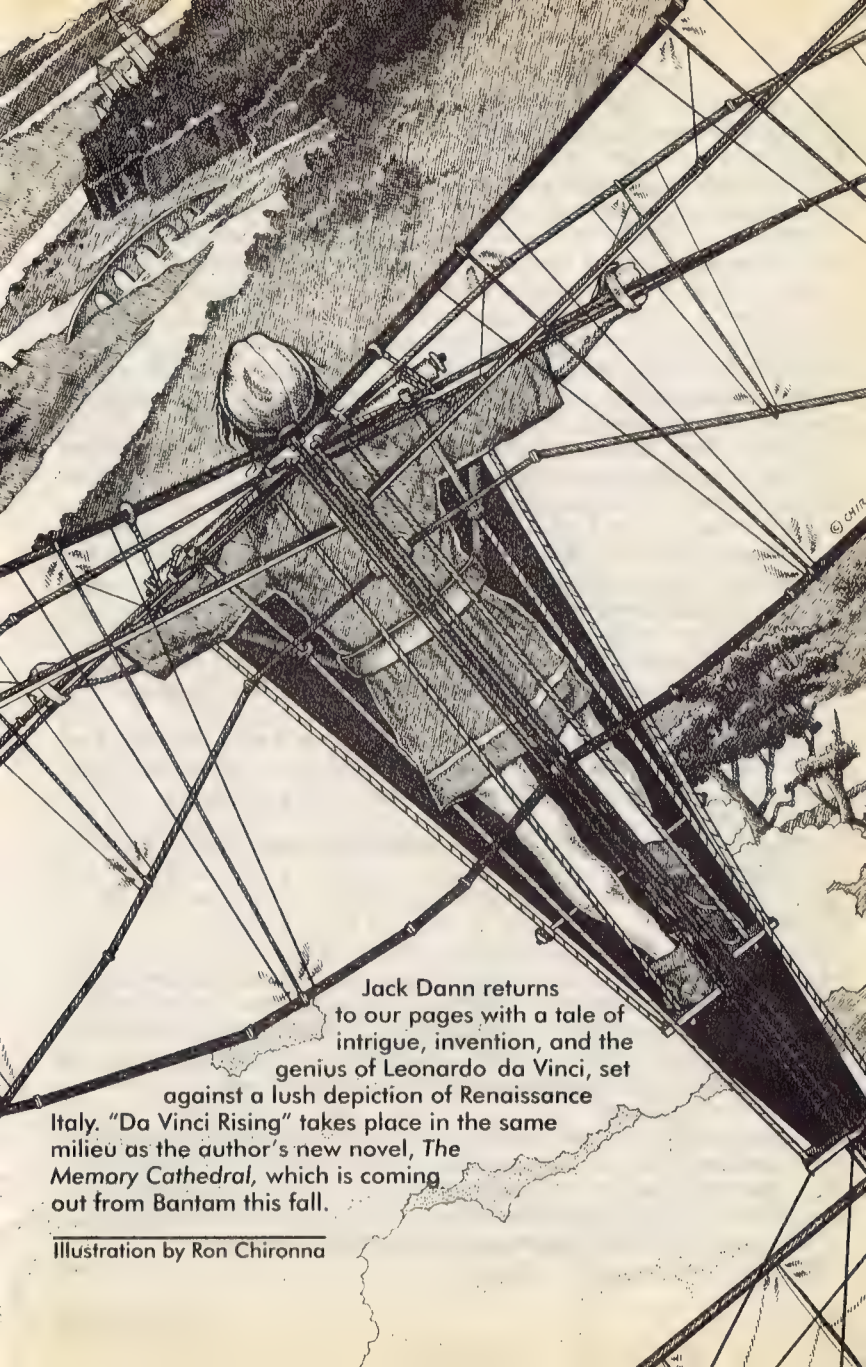
The crew chief waited, but he didn't get a reply. He gave a thumbs-up to the pilot. The bird lifted off, rotor blades clattering.

As day drew to a close, John lay propped against a gnarled and weather-beaten tree. By the golden light of the dying sun, he counted his remaining cash and browsed through a copy of *Army Manual 86-1994: Combat Funeral Expenses*. ●

Jack Dann

DA VINCI RISING





Jack Dann returns to our pages with a tale of intrigue, invention, and the genius of Leonardo da Vinci, set against a lush depiction of Renaissance Italy. "Da Vinci Rising" takes place in the same milieu as the author's new novel, *The Memory Cathedral*, which is coming out from Bantam this fall.

Illustration by Ron Chironna

Dressed as if he were on fire—in a doublet of heliotrope and crimson over a blood-red shirt—Leonardo da Vinci entered the workshop of his master, Andrea Verrocchio.

Verrocchio had invited a robust and august company of men to what had become one of the most important salons in Florence. The many conversations were loud and the floor was stained with wine. Leonardo's fellow apprentices stood near the walls, discreetly listening and interjecting a word here and there. Normally, Master Andrea cajoled the apprentices to work—he had long given up on Leonardo, the best of them all, who worked when he would—but tonight he had closed the shop. The aged Paolo del Pozzo Toscanelli, who had taught Leonardo mathematics and geography, sat near a huge earthenware jar and a model of the lavabado that would be installed in the old Sacristy of San Lorenzo. A boy with dark intense eyes and a tight accusing mouth stood behind him like a shadow. Leonardo had never seen this boy before; perhaps Toscanelli had but recently taken this waif into his home.

"I want you to meet a young man with whom you have much in common," Toscanelli said. "His father is also a notary, like yours. He has put young Niccolo in my care. Niccolo is a child of love, also like you, and extremely talented as a poet and playwright and rhetorician. He is interested in everything, and he seems unable to finish anything! But unlike you, Leonardo, he talks very little. Isn't that right, Niccolo?"

"I am perfectly capable of talking, Ser Toscanelli," the boy said.

"What's your name?" Leonardo asked.

"Ach, forgive me my lack of manners," Toscanelli said. "Master Leonardo, this is Niccolo Machiavelli, son of Bernardo de Niccolo and Bartolomea Nelli. You may have heard of Bartolomea, a religious poetess of great talent."

Leonardo bowed and said with a touch of sarcasm, "I am honored to meet you, young sir."

"I would like you to help this young man with his education," Toscanelli said.

"But I—"

"You are too much of a lone wolf, Leonardo! You must learn to give generously of your talents. Teach him to see as you do, to play the lyre, to paint. Teach him magic and perspective, teach him about the streets, and women, and the nature of light. Show him your flying machine and your sketches of birds. And I guarantee, he will repay you."

"But he's only a boy!"

Niccolo Machiavelli stood before Leonardo, staring at him expectantly, as if concerned. He was a handsome boy, tall and gangly, but his face was unnaturally severe for one so young. Yet he seemed comfortable alone here in this strange place. Merely curious, Leonardo thought.

"What are you called?" Leonardo asked, taking interest.

"Niccolo," the boy said.

"And you have no nickname?"

"I am called Niccolo Machiavelli, that is my name."

"Well, I shall call you Nicco, young sir. Do you have any objections?"

After a pause, he said, "No, Maestro," but the glimmer of a smile compressed his thin lips.

"So your new name pleases you somewhat," Leonardo said.

"I find it amusing that you feel it necessary to make my name smaller. Does that make you feel larger?"

Leonardo laughed. "And what is your age?"

"I am almost fifteen."

"But you are really fourteen, is that not so?"

"And you are still but an apprentice to Master Andrea, yet you are truly a master, or so Master Toscanelli has told me. Since you are closer to being a master, wouldn't you prefer men to think of you as such? Or would you rather be treated as an apprentice such as the one there who is in charge of filling glasses with wine? Well, Master Leonardo. . . ?"

Leonardo laughed again, taking a liking to this intelligent boy who acted as if he possessed twice his years, and said, "You may call me Leonardo."

At that moment, Andrea Verrocchio walked over to Leonardo with Lorenzo de Medici in tow. Lorenzo was magnetic, charismatic, and ugly. His face was coarse, overpowered by a large, flattened nose, and he was suffering one of his periodic outbreaks of eczema; his chin and cheeks were covered with a flesh-colored paste. He had a bull-neck and long, straight brown hair, yet he held himself with such grace that he appeared taller than the men around him. His eyes were perhaps his most arresting feature, for they looked at everything with such friendly intensity, as if to see through things and people alike.

"We have in our midst Leonardo da Vinci, the consummate conjurer and prestidigitator," Verrocchio said, bowing to Lorenzo de Medici as he presented Leonardo to him; he spoke loud enough for all to hear. "Leonardo has fashioned a machine that can carry a man in the air like a bird. . . ."

"My sweet friend Andrea has often told me about your inventiveness, Leonardo da Vinci," Lorenzo said, a slight sarcasm in his voice; ironically, he spoke to Leonardo in much the same good-humored yet condescending tone that Leonardo had used when addressing young Machiavelli. "But how do you presume to effect this miracle of flight? Surely not by means of your cranks and pulleys! Will you conjure up the flying beast Geryon, as we read Dante did, and so descend upon its neck into the infernal regions? Or will you merely *paint* yourself into the sky?"

Everyone laughed at that, and Leonardo, who would not dare to try to seize the stage from Lorenzo, explained, "My most illustrious Lord, you may see that the beating of its wings against the air supports a heavy eagle in the highest and rarest atmosphere, close to the sphere of elemental fire. Again, you may see the air in motion over the sea fill the swelling sails and drive heavily laden ships. Just so could a man with

wings large enough and properly connected learn to overcome the resistance of the air and, by conquering it, succeed in subjugating it and rising above it.

"After all," Leonardo continued, "a bird is nothing more than an instrument that works according to mathematical laws, and it is within the capacity of man to reproduce that instrument with all its movements."

"But a man is not a bird," Lorenzo said. "A bird has sinews and muscles that are incomparably more powerful than a man's. If we were constructed so as to have wings, we would have been provided with them by the Almighty."

"Then you think we are too weak to fly?"

"Indeed, I think the evidence would lead reasonable men to that conclusion," Lorenzo said.

"But surely," Leonardo said, "you have seen falcons carrying ducks, and eagles carrying hares; and there are times when these birds of prey must double their rate of speed to follow their prey. But they only need a little force to sustain themselves, and to balance themselves on their wings, and flap them in the pathway of the wind and so direct the course of their journeying. A slight movement of the wings is sufficient, and the greater the size of the bird, the slower the movement. It's the same with men, for we possess a greater amount of strength in our legs than our weight requires. In fact, we have twice the amount of strength we need to support ourselves. You can prove this by observing how far the marks of one of your men's feet will sink into the sand of the seashore. If you then order another man to climb upon his back, you can observe how much deeper the foot marks will be. But remove the man from the other's back and order the first man to jump as high as he can, and you will find that the marks of his feet will now make a deeper impression where he has jumped than in the place where he had the other man on his back. That's double proof that a man has more than twice the strength he needs to support himself . . . more than enough to fly like a bird."

Lorenzo laughed. "Very good, Leonardo. But I would have to see with my own eyes your machine that turns men into birds. Is *that* what you've been spending your precious time doing, instead of working on the statues I commissioned you to repair?"

Leonardo let his gaze drop to the floor.

"Not at all," Verrocchio interrupted, "Leonardo has indeed been with me in your gardens applying his talent to the repair of—"

"Show me this machine, painter," Lorenzo said to Leonardo. "I could use such a device to confound my enemies, especially those wearing the colors of the south." The veiled reference was to Pope Sixtus IV and the Florentine Pazzi family. "Is it ready to be used?"

"Not just yet, Magnificence," Leonardo said "I'm still experimenting."

Everyone laughed, including Lorenzo. "Ah, experimenting is it . . . ? Well, then I'll pledge you to communicate with me when it's finished. But from your last performance, I think that none of us need worry."

Humiliated, Leonardo could only avert his eyes.

"Tell me, how long do you anticipate that your . . . experiments will take?"

"I think I could safely estimate that my 'contraption' would be ready for flight in two weeks," Leonardo said, taking the advantage, to everyone's surprise. "I plan to launch my great bird from Swan Mountain in Fiesole."

The studio became a roar of surprised conversation.

Leonardo had no choice except to meet Lorenzo's challenge; if he did not, Lorenzo might ruin his career. As it was, his Magnificence obviously considered Leonardo to be a dilettante, a polymath genius who could not be trusted to bring his commissions to fruition.

"Forgive my caustic remarks, Leonardo, for everyone in this room respects your pretty work," Lorenzo said. "But I will take you up on your promise; in two weeks we travel to Fiesole!"

Two

One could almost imagine that the Great Bird was already in flight, hovering in the gauzy morning light like a great, impossible hummingbird. It was a chimerical thing that hung from the high attic ceiling of Leonardo's workshop in Verrocchio's *bottega*: a tapered plank fitted with hand operated cranks, hoops of well-tanned leather, pedals, windlass, oars, and saddle. Great ribbed batlike wings made of cane and fustian and starched taffeta were connected to the broader end of the plank. They were dyed bright red and gold, the colors of the Medici, for it was the Medici who would attend its first flight.

As Leonardo had written in his notebook: *Remember that your bird must imitate only the bat because its webbing forms a framework that gives strength to the wings. If you imitate the birds' wings, you will discover the feathers to be disunited and permeable to the air. But the bat is aided by the membrane which binds the whole and is not pervious.* This was written backward from right to left in Leonardo's idiosyncratic "mirror" script that was all but impossible to decipher. Leonardo lived in paranoid fear that his best ideas and inventions would be stolen.

Although he sat before a canvas he was painting, his eyes smarting from the miasmas of varnish and linseed oil and first grade turpentine, Leonardo nervously gazed up at his invention. It filled the upper area of the large room, for its wingspan was over fifteen ells—more than twenty-five feet.

For the past few days Leonardo had been certain that something was not quite right with his great bird, yet he could not divine what it might be. Nor could he sleep well, for he had been having nightmares; no doubt they were a consequence of his apprehensions over his flying machine, which was due to be flown from the top of a mountain in just ten days. His dream was always the same: he would be falling from a great height . . . without wings, without harness . . . into a barely luminescent

void, while above him the familiar sunlit hills and mountains that overlooked Vinci would be turning vertiginously. And he would awaken in a cold sweat, tearing at his covers, his heart beating in his throat as if to choke him.

Leonardo was afraid of heights. While exploring the craggy and dangerous slopes of Monte Albano as a child, he had fallen from an overhang and almost broken his back. But Leonardo was determined to conquer this and every other fear. He would become as familiar with the airy realms as the birds that soared and rested on the winds. He would make the very air his ally, his support and security.

There was a characteristic knock on the door: two light taps followed by a loud thump.

"Enter, Andrea, lest the dead wake," Leonardo said without getting up.

Verrocchio stormed in with his foreman Franceso di Simone, a burly, full-faced, middle-aged man whose muscular body was just beginning to go to seed. Francesco carried a silver tray, upon which were placed cold meats, fruit, and two cruses of milk; he laid it on the table beside Leonardo. Both Verrocchio and Francesco had been at work for hours, as was attested by the lime and marble dust that streaked their faces and shook from their clothes. They were unshaven and wore work gowns, although Verrocchio's was more a frock, as if, indeed, he envisioned himself as a priest to art—the unblest "tenth muse."

Most likely they had been in one of the outer workshops, for Andrea was having trouble with a terra cotta *risurrezione* relief destined for Lorenzo's villa in Careggi. But this bottega was so busy that Andrea's attention was constantly in demand. "Well, at least *you're* awake," Andrea said to Leonardo as he looked appreciatively at the painting-in-progress. Then he clapped his hands, making such a loud noise that Niccolo, who was fast asleep on his pallet beside Leonardo's, awakened with a cry, as if from a particularly nasty nightmare. Andrea chuckled and said, "Well, good morning, young ser. Perhaps I could have one of the other apprentices find enough work for you to keep you busy during the spine of the morning."

"I apologize, Maestro Andrea, but Maestro Leonardo and I worked late into the night." Niccolo removed his red, woolen sleeping cap and hurriedly put on a gown that lay on the floor beside his pallet, for, like most Florentines, he slept naked.

"Ah, so now it's Maestro Leonardo, is it?" Andrea said good-naturedly. "Well, eat your breakfast, both of you. Today I'm a happy man; I have news."

Niccolo did as he was told, and, in fact, ate like a trencherman, spilling milk on his lap.

"One would never guess that he came from a good family," Andrea said, watching Niccolo stuff his mouth.

"Now tell me your news," Leonardo said.

"It's not all that much to tell." Nevertheless Andrea could not repress

a grin. "*Il Magnifico* has informed me that my 'David' will stand prominently in the Palazzo Vecchio over the great staircase."

Leonardo nodded. "But, certainly, you knew Lorenzo would find a place of special honor for such a work of genius."

"I don't know if you compliment me or yourself, Leonardo," Andrea said. "After all, you are the model."

"You took great liberties," Leonardo said. "You may have begun with my features, but you have created something sublime out of the ordinary. You deserve the compliment."

"I fear this pleasing talk will cost me either money or time," Andrea said.

Leonardo laughed. "Indeed, today I must be out of the city."

Andrea gazed up at Leonardo's flying machine and said, "No one would blame you if you backed out of this project, or, at least, allowed someone else to fly your contraption. You need not prove yourself to Lorenzo."

"I would volunteer to fly your mechanical bird, Leonardo," Niccolo said earnestly.

"No, it must be me."

"Was it not to gain experience that Master Toscanelli sent me to you?"

"To gain experience, yes; but not to jeopardize your life," Leonardo said.

"You are not satisfied it will work?" Andrea asked.

"Of course I am, Andrea. If I were not, I would bow before Lorenzo and give him the satisfaction of publicly putting me to the blush."

"Leonardo, be truthful with me," Verrocchio said. "It is to Andrea you speak, not a rich patron."

"Yes, my friend, I am worried," Leonardo confessed. "Something is indeed wrong with my Great Bird, yet I cannot quite put my finger on it. It is most frustrating."

"Then you must not fly it!"

"It will fly, Andrea. I promise you that."

"You have my blessing to take the day off," Verrocchio said.

"I am most grateful," Leonardo said; and they both laughed, knowing that Leonardo would have left for the country with or without Andrea's permission.

"Well, we must be off," Leonardo said to Andrea, who nodded and took his leave.

"Come on, Nicco," Leonardo said, suddenly full of energy. "Get yourself dressed"; and as Niccolo did so, Leonardo put a few finishing touches on his painting, then quickly cleaned his brushes, hooked his sketchbook onto his belt, and once again craned his neck to stare at his invention that hung from the ceiling. He needed an answer, but he had not yet formulated the question.

When they were out the door, Leonardo felt that he had forgotten something. "Nicco, fetch me the book Maestro Toscanelli loaned to me . . . the one he purchased from the Chinese trader. I might wish to read in the country."

"The country?" Niccolo asked, carefully putting the book into a sack, which he carried under his arm.

"Do you object to nature?" Leonardo asked sarcastically. "*Usus est optimum magister* . . . and in that I agree wholeheartedly with the ancients. Nature herself is the mother of all experience; and experience must be your teacher, for I have discovered that even Aristotle can be mistaken on certain subjects." As they left the bottega, he continued: "But those of Maestro Ficino's Academy, they go about all puffed and pompous, mouthing the eternal aphorisms of Plato and Aristotle like parrots. They might think that because I have not had a literary education, I am uncultured; but *they* are the fools. They despise me because I am an inventor, but how much more are they to blame for *not* being inventors, these trumpeters and reciters of the works of others! They considered my glass to study the skies and make the moon large, a conjuring trick, and do you know why?" Before Niccolo could respond, Leonardo said, "Because they consider sight to be the most untrustworthy of senses, when, in fact, it is the supreme organ. Yet that does not prevent them from wearing spectacles in secret. Hypocrites!"

"You seem very angry, Maestro," Niccolo said to Leonardo.

Embarrassed at having launched into this diatribe, Leonardo laughed at himself and said, "Perhaps I am, but do not worry about it, young friend."

"Maestro Toscanelli seems to respect the learned men of the Academy," Niccolo said.

"He respects Plato and Aristotle, as well he should. But he does not teach at the Academy, does he? No, instead, he lectures at the school at Santo Spirito for the Augustinian brothers. That should tell you something."

"I think it tells me that you have an ax to grind, Master . . . and that's also what Maestro Toscanelli told me."

"What else did he tell you, Nicco?" Leonardo asked.

"That I should learn from your strengths and weaknesses, and that you are smarter than everyone in the Academy."

Leonardo laughed at that and said, "You lie very convincingly."

"That, Maestro, comes naturally."

The streets were busy and noisy; and the sky, which seemed pierced by the tiled mass of the Duomo and the Palace of the Signoria, was cloudless and sapphire-blue. There was the sweet smell of sausage in the air, and young merchants—practically children—stood behind stalls and shouted at every passerby. This market was called *Il Baccano*, the place of uproar. Leonardo bought some cooked meat, beans, fruit, and a bottle of cheap local wine for Niccolo and himself. They continued on into different neighborhoods and markets. They passed Spanish Moors with their slave retinues from the Ivory Coast; Mamluks in swathed robes and flat turbans; Muscovy Tartars and Mongols from Cathay; and merchants from England and Flanders, who had sold their woolen cloth and

were on their way to the Ponte Vecchio to purchase trinkets and baubles. Niccolo was all eye and motion as they passed elegant and beautiful "butterflies of the night" standing beside their merchant masters under the shade of guild awnings; these whores and mistresses modeled jeweled garlands, and expensive garments of violet, crimson, and peach. Leonardo and Niccolo passed stall after stall—brushing off young hawkers and old, disease-ravaged beggars—and flowed with the crowds of peddlers, citizens, and visitors as if they were flotsam in the sea. Young men of means, dressed in short doublets, wiggled and swayed like young girls through the streets; they roistered and swashbuckled, laughed and sang and bullied, these favored ones. Niccolo could not help but laugh at the scholars and student wanderers from England and Scotland and Bohemia, for although their *lingua franca* was Latin, their accents were extravagant and overwrought.

"Ho, Leonardo," cried one vendor, then another, as Leonardo and Niccolo turned a corner. Then the screees and cries of birds sounded, for the bird-sellers were shaking the small wooden cages packed with wood pigeons, owls, mousebirds, bee-eaters, hummingbirds, crows, blue rockthrushes, warblers, flycatchers, wagtails, hawks, falcons, eagles, and all manner of swans, ducks, chickens, and geese. As Leonardo approached, the birds were making more commotion than the vendors and buyers on the street. "Come here, Master!" shouted a red-haired man wearing a stained brown doublet with torn sleeves. His right eye appeared infected, for it was bloodshot, crusted, and tearing. He shook two cages, each containing hawks; one bird was brown with a forked chestnut tail, and the other was smaller and black with a notched tail. They banged against the wooden bars and snapped dangerously. "Buy these, Maestro Artista, please . . . they are just what you need, are they not? And look how many doves I have, do they not interest you, good Master?"

"Indeed, the hawks are fine specimens," Leonardo said, drawing closer, while the other vendors called and shouted to him, as if he were carrying the grail itself. "How much?"

"Ten denari."

"Three."

"Eight."

"Four, and if that is not satisfactory, I can easily talk to your neighbor, who is flapping his arms as if he, himself, could fly."

"Agreed," said the vendor, resigned.

"And the doves?"

"For how many, Maestro?"

"For the lot."

While Leonardo dickered with the bird vendor, hecklers gathered around to watch, talking openly about him, not seeming to care if Niccolo—or Leonardo himself—could hear them.

"He's as mad as Ajax," said an old man who had just sold a few chickens and doves, and was as animated as the street thugs and young beggars standing around him. "He'll let them all go, watch, you'll see!"

"I've heard tell he won't eat meat," said one matronly woman to another. "He lets the birds go free because he feels sorry for the poor creatures."

"Well, to be safe, don't look straight at him," said the other woman, as she made the sign of the cross. "He might be a sorcerer. He could put evil in your eye, and enter right into your soul!"

Her companion shivered and followed suit by crossing herself.

"Nicco," Leonardo shouted, making himself heard above the din. "Come here and help me." When Niccolo stepped up to him, Leonardo said, "If you could raise your thoughts from those of butterflies"—and by that he meant whores—"you might learn something of observation and the ways of science." He thrust his hand into the cage filled with doves and grasped one. The tiny bird made a frightened noise; as Leonardo took it from its cage, he could feel its heart beating in his palm. Then he opened his hand and watched the dove fly away. The crowd laughed and jeered and applauded and shouted for more. He took another bird out of its cage and released it. His eyes squinted almost shut; and, as he gazed at the dove beating its wings so hard that, but for the crowd, one could have heard them clap, he seemed lost in thought. "Now, Nicco, I want you to let the birds free, one by one."

"Why me?" Niccolo asked, somehow loath to seize the birds.

"Because *I* wish to draw," Leonardo said. "Is this chore too difficult for you?"

"I beg your pardon, Maestro," Niccolo said, as he reached into the cage. He had a difficult time catching a bird. Leonardo seemed impatient and completely oblivious to the shouts and taunts of the crowd around him. Niccolo let go of one bird, and then another, while Leonardo sketched. Leonardo stood very still, entranced; only his hand moved like a ferret over the bleached folio, as if it had a life and will of its own.

As Niccolo let fly another bird, Leonardo said, "Do you see, Nicco, the bird in its haste to climb strikes its outstretched wings together above its body. Now look how it uses its wings and tail in the same way that a swimmer uses his arms and legs in the water; it's the very same principle. It seeks the air currents, which, invisible, roil around the buildings of our city. And there, its speed is checked by the opening and spreading out of the tail. . . . Let fly another one. Can you see how the wing separates to let the air pass?" and he wrote a note in his mirror script below one of his sketches: *Make device so that when the wing rises up it remains pierced through, and when it falls it is all united.* "Another," he called to Niccolo. And after the bird disappeared, he made another note: *The speed is checked by the opening and spreading out of the tail. Also, the opening and lowering of the tail, and the simultaneous spreading of the wings to their full extent, arrests their swift movement.*

"That's the end of it," Niccolo said, indicating the empty cages. "Do you wish to free the hawks?"

"No," Leonardo said, distracted. "We will take them with us," and Leonardo and Niccolo made their way through the crowd, which now

began to disperse. As if a reflection of Leonardo's change of mood, clouds darkened the sky; and the bleak, refuse-strewn streets took on a more dangerous aspect. The other bird vendors called to Leonardo, but he ignored them, as he did Niccolo. Instead, he stared intently into his notebook as he walked, as if he were trying to decipher ancient runes.

They passed the wheel of the bankrupts. Defeated men sat around a marble inlay that was worked into the piazza in the design of a cart-wheel. A crowd had formed, momentarily, to watch a debtor, who had been stripped naked, being pulled to the roof of the market by a rope. Then there was a great shout as he was dropped headfirst onto the smooth, cold, marble floor.

A sign attached to one of the market posts read:

Give good heed to the small sums thou spendest out of the house, for it is they which empty the purse and consume wealth; and they go on continually. And do not buy all the good victuals which thou seest, for the house is like a wolf: the more thou givest it, the more doth it devour.

The man dropped by the rope was dead.

Leonardo put his arm around Niccolo's shoulders, as if to shield him from death. But he was suddenly afraid . . . afraid that his own "inevitable hour" might not be far away; and he remembered his recurring dream of falling into the abyss. He shivered, his breath came quick, and his skin felt clammy, as if he had just been jolted awake. Just now, on some deep level, he believed that the poisonous phantasms of dreams were real. If they took hold of the soul of the dreamer, they could affect his entire world.

Leonardo saw his Great Bird falling and breaking apart. And he was falling through cold depths that were as deep as the reflections of lanterns in dark water. . . .

"Leonardo? Leonardo!"

"Do not worry. I am fine, my young friend," Leonardo said.

They talked very little until they were in the country, in the high, hilly land north of Florence. Here were meadows and grassy fields, valleys and secret grottos, small roads traversed by ox carts and pack trains, vineyards and cane thickets, dark copses of pine and chestnut and cypress, and olive trees that shimmered like silver hangings each time the wind breathed past their leaves. The deep red tiles of farmstead roofs and the brownish-pink colonnaded villas seemed to be part of the line and tone of the natural countryside. The clouds that had darkened the streets of Florence had disappeared; and the sun was high, bathing the countryside in that golden light particular to Tuscany, a light that purified and clarified as if it were itself the manifestation of desire and spirit.

And before them, in the distance, was Swan Mountain. It rose 1300 feet to its crest, and looked to be pale gray-blue in the distance.

Leonardo and Niccolo stopped in a meadow perfumed with flowers and

gazed at the mountain. Leonardo felt his worries weaken, as they always did when he was in the country. He took a deep breath of the heady air, and felt his soul awaken and quicken to the world of nature and the *oculus spiritualis*: the world of angels.

"That would be a good mountain from which to test your Great Bird," Niccolo said.

"I thought that, too, for it's very close to Florence. But I've since changed my mind. Vinci is not so far away; and there are good mountains there, too." Then after a pause, Leonardo said, "And I do not wish to die here. If death should be my fate, I wish it to be in familiar surroundings."

Niccolo nodded, and he looked as severe and serious as he had when Leonardo had first met him, like an old man inhabiting a boy's body.

"Come now, Nicco," Leonardo said, resting the cage on the ground and sitting down beside it, "let's enjoy this time, for who knows what awaits us later. Let's eat." With that, Leonardo spread out a cloth and set the food upon it as if it were a table. The hawks flapped their wings and slammed against the wooden bars of the cages. Leonardo tossed them each a small piece of sausage.

"I heard gossip in the piazza of the bird vendors that you refuse to eat meat," Niccolo said.

"Ah, did you, now. And what do you think of that?"

Niccolo shrugged. "Well, I have never seen you eat meat."

Leonardo ate a piece of bread and sausage, which he washed down with wine. "Now you have."

"But then why would people say that—"

"Because I don't usually eat meat. They're correct, for I believe that eating too much meat causes to collect what Aristotle defined as cold black bile. That, in turn, afflicts the soul with melancholia. Maestro Toscanelli's friend Ficino believes the same, but for all the wrong reasons. For him magic and astrology take precedence over reason and experience. But be that as it may, I must be very careful that people do not think of me as a follower of the Cathars, lest I be branded a heretic."

"I have not heard of them."

"They follow the teaching of the pope Bogomil, who believed that our entire visible world was created by the Adversary rather than by God. Thus to avoid imbibing the essence of Satan, they forfeit meat. Yet they eat vegetables and fish." Leonardo laughed and pulled a face to indicate that they were crazy. "They could at least be consistent."

Leonardo ate quickly, which was his habit, for he could never seem to enjoy savoring food as others did. He felt that eating, like sleeping, was simply a necessity that took him away from whatever interested him at the moment.

And there was a whole world pulsing in the sunlight around him; like a child, he wanted to investigate its secrets.

"Now . . . watch," he said to Niccolo, who was still eating; and he let loose one of the hawks. As it flew away, Leonardo made notes, scribbling with his left hand, and said, "You see, Nicco, it searches now for a current

of the wind." He loosed the other one. "These birds beat their wings only until they reach the wind, which must be blowing at a great elevation, for look how high they soar. Then they are almost motionless."

Leonardo watched the birds circle overhead, then glide toward the mountains. He felt transported, as if he too were gliding in the Empyrean heights. "They're hardly moving their wings now. They repose in the air as we do on a pallet."

"Perhaps you should follow their example."

"What do you mean?" Leonardo asked.

"Fix your wings on the Great Bird. Instead of beating the air, they would remain stationary."

"And by what mode would the machine be propelled?" Leonardo asked; but he answered his own question, for immediately the idea of the Archimedian Screw came to mind. He remembered seeing children playing with toy whirlybirds: by pulling a string, a propeller would be made to rise freely into the air. His hand sketched, as if thinking on its own. He drew a series of sketches of leaves gliding back and forth, falling to the ground. He drew various screws and propellers. There might be something useful. . . .

"Perhaps if you could just catch the current, then you would not have need of human power," Niccolo said. "You could fix your bird to soar . . . somehow."

Leonardo patted Niccolo on the shoulder, for, indeed, the child was bright. But it was all wrong; it *felt* wrong. "No, my young friend," he said doggedly, as if he had come upon a wall that blocked his thought, "the wings must be able to row through the air like a bird's. That is nature's method, the most efficient way."

Restlessly, Leonardo wandered the hills. Niccolo finally complained of being tired and stayed behind, comfortably situated in a shady copse of mossy-smelling cypresses.

Leonardo walked on alone.

Everything was perfect: the air, the warmth, the smells and sounds of the country. He could almost apprehend the pure forms of everything around him, the phantasms reflected in the *proton organon*: the mirrors of his soul. But not quite. . . .

Indeed, something was wrong, for instead of the bliss, which Leonardo had so often experienced in the country, he felt thwarted . . . lost.

Thinking of the falling leaf, which he had sketched in his notebook, he wrote: *If a man has a tent roof of caulked linen twelve ells broad and twelve ells high, he will be able to let himself fall from any great height without danger to himself.* He imagined a pyramidal parachute, yet considered it too large and bulky and heavy to carry on the Great Bird. He wrote another hasty note: *Use leather bags, so a man falling from a height of six brachia will not injure himself, falling either into water or upon land.*

He continued walking, aimlessly. He sketched constantly, as if without

conscious thought: grotesque figures and caricatured faces, animals, impossible mechanisms, studies of various madonnas with children, imaginary landscapes, and all manner of actual flora and fauna. He drew a three-dimensional diagram of a toothed gearing and pulley system, and an apparatus for making lead. He made a note to locate Albertus Magnus's *On Heaven and Earth*—perhaps Toscanelli had a copy. His thoughts seemed to flow like the Arno, from one subject to another, and yet he could not position himself in that psychic place of languor and bliss, which he imagined to be the perfect realm of Platonic forms.

As birds flew overhead, he studied them and sketched feverishly. Leonardo had an extraordinarily quick eye, and he could discern movements that others could not see. He wrote in tiny letters beside his sketches: *Just as we may see a small imperceptible movement of the rudder turn a ship of marvelous size loaded with very heavy cargo—and also amid such weight of water pressing upon its every beam and in the teeth of impetuous winds that envelop its mighty sails—so, too, do birds support themselves above the course of the winds without beating their wings. Just a slight movement of wing or tail, serving them to enter either below or above the wind, suffices to prevent their fall. Then he added, When, without the assistance of the wind and without beating its wings, the bird remains in the air in the position of equilibrium, this shows that the center of gravity is coincident with the center of resistance.*

"Ho, Leonardo," shouted Niccolo, who was running after him. The boy was out of breath; he carried the brown sack, which contained some leftover food, most likely, and Maestro Toscanelli's book. "You've been gone over three hours!"

"And is that such a long time?" Leonardo asked.

"It is for me. What are you doing?"

"Just walking . . . and thinking." After a beat, Leonardo said, "But you have a book, why didn't you read it?"

Niccolo smiled and said, "I tried, but then I fell asleep."

"So now we have the truth," Leonardo said. "Nicco, why don't you return to the bottega? I must remain here . . . to think. And you are obviously bored."

"That's all right, Maestro," Niccolo said anxiously. "If I can stay with you, I won't be bored, I promise."

Leonardo smiled, in spite of himself, and said, "Tell me what you've gleaned from the little yellow book."

"I can't make it out . . . yet. It seems to be all about light."

"So Maestro Toscanelli told me. Its writings are very old and concern memory and the circulation of light." Leonardo could not resist teasing his apprentice. "Do you find your memory much improved after reading it?"

Niccolo shrugged, as if it was of no interest to him, and Leonardo settled down in a grove of olive trees to read *The Secret of the Golden Flower*; it took him less than an hour, for the book was short. Niccolo ate some fruit and then fell asleep again, seemingly without any trouble.

Most of the text seemed to be magical gibberish, yet suddenly these words seemed to open him up:

There are a thousand spaces, and the light-flower of heaven and earth fills them all. Just so does the light-flower of the individual pass through heaven and cover the earth. And when the light begins to circulate, all of heaven and the earth, all the mountains and rivers—everything—begins to circulate with light. The key is to concentrate your own seed-flower in the eyes. But be careful, children, for if one day you do not practice meditation, this light will stream out, to be lost who knows where. . . ?

Perhaps he fell asleep, for he imagined himself staring at the walls of his great and perfect mnemonic construct: the memory cathedral. It was pure white and smooth as dressed stone . . . it was a church for all his experience and knowledge, whether holy or profane. Maestro Toscanelli had taught him long ago how to construct a church in his imagination, a storage place of images—hundreds of thousands of them—which would represent everything Leonardo wished to remember. Leonardo caught all the evanescent and ephemeral stuff of time and trapped it in this place . . . all the happenings of his life, everything he had seen and read and heard; all the pain and frustration and love and joy were neatly shelved and ordered inside the colonnaded courts, chapels, vestries, porches, towers, and crossings of his memory cathedral.

He longed to be inside, to return to sweet, comforting memory; he would dismiss the ghosts of fear that haunted its dark catacombs. But now he was seeing the cathedral from a distant height, from the summit of Swan Mountain, and it was as if his cathedral had somehow become a small part of what his memory held and his eyes saw. It was as if his soul could expand to fill heaven and earth, the past and the future. Leonardo experienced a sudden, vertiginous sensation of freedom; indeed, heaven and earth seemed to be filled with a thousand spaces. It was just as he had read in the ancient book: everything was circulating with pure light . . . blinding, cleansing light that coruscated down the hills and mountains like rainwater, that floated in the air like mist, that heated the grass and meadows to radiance.

He felt bliss.

Everything was preternaturally clear; it was as if he was seeing into the essence of things.

And then, with a shock, he felt himself slipping, falling from the mountain.

This was his recurrent dream, his nightmare: to fall without wings and harness into the void. Yet every detail registered: the face of the mountain, the mossy crevasses, the smells of wood and stone and decomposition, the screeing of a hawk, the glint of a stream below, the roofs of farmhouses, the geometrical demarcations of fields, and the spiraling

wisps of cloud that seemed to be woven into the sky. But then he tumbled and descended into palpable darkness, into a frightful abyss that showed no feature and no bottom.

Leonardo screamed to awaken back into daylight, for he knew this blind place, which the immortal Dante had explored and described. But now he felt the horrid bulk of the flying monster Geryon beneath him, supporting him . . . this, the same beast that had carried Dante into *Malebolge*: the Eighth Circle of Hell. The monster was slippery with filth and smelled of death and putrefaction; the air itself was foul, and Leonardo could hear behind him the thrashing of the creature's scorpion tail. Yet it also seemed that he could hear Dante's divine voice whispering to him, drawing him through the very walls of Hades into blinding light.

But now he was held aloft by the Great Bird, his own invention. He soared over the trees and hills and meadows of Fiesole, and then south, to fly over the roofs and balconies and spires of Florence herself.

Leonardo flew without fear, as if the wings were his own flesh. He moved his arms easily, working the great wings that beat against the calm, spring air that was as warm as his own breath. But rather than resting upon his apparatus, he now hung below it. He operated a windlass with his hands to raise one set of wings and kicked a pedal with his heels to lower the other set of wings. Around his neck was a collar, which controlled a rudder that was effectively the tail of this bird.

This was certainly not the machine that hung in Verrocchio's bottega. Yet with its double set of wings, it seemed more like a great insect than a bird, and—

Leonardo awakened with a jolt, to find himself staring at a horsefly feeding upon his hand.

Could he have been sleeping with his eyes open, or had this been a waking dream? He shivered, for his sweat was cold on his arms and chest.

He shouted, awakening Niccolo, and immediately began sketching and writing in his notebook. "I have it!" he said to Niccolo. "Double wings like a fly will provide the power I need! You see, it is just as I told you: nature provides. Art and invention are merely imitation." He drew a man hanging beneath an apparatus with hand-operated cranks and pedals to work the wings. Then he studied the fly, which still buzzed around him, and wrote: *The lower wings are more slanting than those above, both as to length and as to breadth. The fly, when it hovers in the air upon its wings, beats its wings with great speed and din, raising them from the horizontal position up as high as the wing is long. And as it raises them, it brings them forward in a slanting position in such a way as almost to strike the air edgewise.* Then he drew a design for the rudder assembly. "How could I not have seen that, just as a ship needs a rudder, so, too, would my machine?" he said. "It will act as the tail of a bird. And by hanging the operator below the wings, equilibrium will be more easily maintained. There," he said, standing up and pulling Niccolo to his feet. "Perfection!"

He sang one of Lorenzo de Medici's bawdy inventions and danced around Niccolo, who seemed confused by his master's strange behavior. He grabbed the boy's arms and swung him around in a circle.

"Perhaps the women watching you free the birds were right," Niccolo said. "Perhaps you *are* as mad as Ajax."

"Perhaps I am," Leonardo said, "but I have a lot of work to do, for the Great Bird must be changed if it is to fly for *Il Magnifico* next week." He placed the book of the Golden Flower in the sack, handed it to Niccolo, and began walking in the direction of the city.

It was already late afternoon.

"I'll help you with your machine," Niccolo said.

"Thank you, I'll need you for many errands."

That seemed to satisfy the boy. "Why did you shout and then dance as you did, Maestro?" Niccolo asked, concerned. He followed a step behind Leonardo, who seemed to be in a hurry.

Leonardo laughed and slowed his stride until Niccolo was beside him. "It's difficult to explain. Suffice it to say that solving the riddle of my Great Bird made me happy."

"But how did you do it? I thought you had fallen asleep."

"I had a dream," Leonardo said. "It was a gift from the poet Dante Alighieri."

"He gave you the answer?" Niccolo asked, incredulous.

"That he did, Nicco."

"Then you *do* believe in spirits?"

"No, Nicco—just in dreams."

Three

In the streets and markets, people gossiped of a certain hermit—a champion—who had come from Volterra, where he had been ministering to the lepers in a hospital. He had come here to preach and harangue and save the city. He was a young man, and some had claimed to have seen him walking barefoot past the Church of Salvatore. They said he was dressed in the poorest of clothes, with only a wallet on his back. His face was bearded and sweet, and his eyes were blue; certainly he was a manifestation of the Christ himself, stepping on the very paving stones that modern Florentines walked. He had declared that the days to follow would bring harrowings, replete with holy signs, for so he had been told by both the Angel Raphael and Saint John, who had appeared to him in their flesh, as men do to other men, and not in a dream.

It was said that he preached to the Jews in their poor quarter, and also to the whores and beggars; and he was also seen standing upon the *ringheiera* of the *Signore* demanding an audience with the "Eight." But they sent him away. So now there could be no intercession for what was about to break upon Florence.

The next day, a Thursday, one of the small bells of Santa Maria delle

Fiore broke loose and fell, breaking the skull of a stonemason passing below. By a miracle, he lived, although a bone had to be removed from his head.

But it was seen as a sign, nevertheless.

And on Friday, a boy of twelve fell from the large bell of the Palagio and landed on the gallery. He died several hours later.

By week's end, four families in the city and eight in the *Borgo di Ricorboli* were stricken with fever and *buboes*, the characteristic swellings of what had come to be called "the honest plague." There were more reports of fever and death every day thereafter, for the Black Reaper was back upon the streets, wending his way through homes and hospitals, cathedrals and taverns, and whorehouses and nunneries alike. It was said that he had a companion, the hag Lachesis, who followed after him while she wove an ever-lengthening tapestry of death; hers was an accounting of "the debt we must all pay," created from her never-ending skein of black thread.

One hundred and twenty people had died in the churches and hospitals by *nella quiddadecima*; the full moon. There were twenty-five deaths alone at *Santa Maria Nuova*. The "Eight" of the Signoria duly issued a notice of health procedures to be followed by all Florentines; the price of foodstuffs rose drastically; and although Lorenzo's police combed the streets for the spectral hermit, he was nowhere to be found within the precincts of the city.

Lorenzo and his retinue fled to his villa at Careggi. But rather than follow suit and leave the city for the safety of the country, Verrocchio elected to remain in his bottega. He gave permission to his apprentices to quit the city until the plague abated, if they had the resources; but most, in fact, stayed with him.

The bottega seemed to be in a fervor.

One would think that the deadline for every commission was tomorrow. Verrocchio's foreman Francesco kept a tight and sure rein on the apprentices, pressing them into a twelve to fourteen hour schedule; and they worked as they had when they constructed the bronze palla that topped the dome of Santa Maria delle Fiore, as if quick hands and minds were the only weapons against the ennui upon which the Black Fever might feed. Francesco had become invaluable to Leonardo, for he was quicker with things mechanical than Verrocchio himself; and Francesco helped him design an ingenious plan by which the flying machine could be collapsed and dismantled and camouflaged for easy transportation to Vinci. The flying machine, at least, was complete; again, thanks to Francesco, who made certain that Leonardo had a constant supply of strong-backed apprentices and material.

Leonardo's studio was a mess, a labyrinth of footpaths that wound past bolts of cloth, machinery, stacks of wood and leather, jars of paint, sawhorses, and various gearing devices; the actual flying machine took up the center of the great room. Surrounding it were drawings, insects mounted on boards, a table covered with birds and bats in various stages

of vivisection, and constructions of the various parts of the redesigned flying machine—artificial wings, rudders, and flap valves.

The noxious odors of turpentine mixed with the various perfumes of decay; these smells disturbed Leonardo not at all, for they reminded him of his childhood, when he kept all manner of dead animals in his room to study and paint. All other work—the paintings and terra-cotta sculptures—were piled in one corner. Leonardo and Niccolo could no longer sleep in the crowded, foul-smelling studio; they had laid their pallets down in the young apprentice Tista's room.

Tista was a tall, gangly boy with a shock of blond hair. Although he was about the same age as Niccolo, it was as if he had become Niccolo's apprentice. The boys had become virtually inseparable: Niccolo seemed to relish teaching Tista about life, art, and politics; but then Niccolo had a sure sense of how people behaved, even if he lacked experience. He was a natural teacher, more so than Leonardo. For Leonardo's part, he didn't mind having the other boy underfoot, and had, in fact, become quite fond of him. But Leonardo was preoccupied with his work. The Black Death had given him a reprieve—just enough time to complete and test his machine—for not only did *Il Magnifico* agree to rendezvous in Vinci rather than Pistoia, he himself set the date forward another fortnight.

It was unbearably warm in the studio as Niccolo helped Leonardo remove the windlass mechanism and twin "oars" from the machine, which were to be packed into a numbered, wooden container. "It's getting close," Niccolo said, after the parts were fitted securely into the box. "Tista tells me that he heard a family living near the Porta alla Croce caught the fever."

"Well, we shall be on our way at dawn," Leonardo said. "You shall have the responsibility of making certain that everything is properly loaded and in its proper place."

Niccolo seemed very pleased with that; he had, in fact, proven himself to be a capable worker and organizer. "But I still believe that we should wait until the dark effluvioms have evaporated from the air. At least until after the *becchini* have carried the corpses to their graves."

"Then we will leave after first light," Leonardo said.

"Good."

"You might be right about the possible contagion of corpses and *becchini*. But as to your effluvioms . . ."

"Best not to take chances," Verrocchio said; he had been standing in the doorway and peering into the room like a boy who had not yet been caught sneaking through the house. He held the door partially closed, so that it framed him, as if he were posing for his own portrait; and the particular glow of the late afternoon sun seemed to transform and subdue his rather heavy features.

"I think it is as the astrologers say: a conjunction of planets," Verrocchio continued. "It was so during the great blight of 1345. But that was

a conjunction of *three* planets. Very unusual. It will not be like that now, for the conjunction is not nearly so perfect."

"You'd be better to come to the country with us than listen to astrologers," Leonardo said.

"I cannot leave my family. I've told you."

"Then bring them along. My father is already in Vinci preparing the main house for Lorenzo and his retinue. You could think of it as a business holiday; think of the commissions that might fall your way."

"I think I have enough of those for the present," Andrea said.

"That does not sound like Andrea del Verrocchio," Leonardo said, teasing.

"My sisters and cousins refuse to leave," Andrea said. "And who would feed the cats?" he said, smiling, then sighing. He seemed resigned and almost relieved. "My fate is in the lap of the gods . . . as it has always been. And so is *yours*, my young friend."

The two-day journey was uneventful, and they soon arrived in Vinci.

The town of Leonardo's youth was a fortified keep dominated by a medieval castle and its campanile, surrounded by fifty brownish-pink brick houses. Their red tiled roofs were covered with a foliage of chestnut and pine and cypress, and vines of grape and cane thickets brought the delights of earth and shade to the very walls and windows. The town, with its crumbling walls and single arcaded alley, was situated on the elevated spur of a mountain; it overlooked a valley blanketed with olive trees that turned silver when stirred by the wind. Beyond was the valley of Lucca, green and purple-shadowed and ribboned with mountain streams; and Leonardo remembered that when the rain had cleansed the air the crags and peaks of the Apuan Alps near Massa and Cozzile could be clearly seen.

Now that Leonardo was here, he realized how homesick he had been. The sky was clear and the air pellucid; but the poignancy of his memories clouded his vision, as he imagined himself being swept back to his childhood days, once again riding with his Uncle Francesco, whom they called "*lazzarone*" because he did not choose to restrict his zealous enjoyment of life with a profession. But Leonardo and the much older Francesco had been like two privileged boys—princes, riding from farmstead to mill and all around the valley collecting rents for Leonardo's grandfather, the patriarch of the family: the gentle and punctilious Antonio da Vinci.

Leonardo led his apprentices down a cobbled road and past a rotating dovecote on a long pole to a cluster of houses surrounded by gardens, barns, peasant huts, tilled acreage, and the uniform copses of mulberry trees, which his Uncle Francesco had planted. Francesco, "the lazy one," had been experimenting with sericulture, which could prove to be very lucrative indeed, for the richest and most powerful guild in Florence was the *Arte della Seta*: the silk weavers.

"Leonardo, ho!" shouted Francesco from the courtyard of the large, neatly kept, main house, which had belonged to Ser Antonio. It was stone

and roofed with red tile, and looked like the ancient long-houses of the French; but certainly no animals would be kept in the home of Piero da Vinci: Leonardo's father.

Like his brother, Francesco had dark curly hair that was graying at the temples and thinning at the crown. Francesco embraced Leonardo, nearly knocking the wind out of him, and said, "You have caused substantial havoc in this house, my good nephew! Your father is quite anxious."

"I'm sure of that," Leonardo said as he walked into the hall. "It's wonderful to see you, Uncle."

Beyond this expansive, lofted room were several sleeping chambers, two fireplaces, a kitchen and pantry, and workrooms, which sometimes housed the peasants who worked the various da Vinci farmholds; there was a level above with three more rooms and a fireplace; and ten steps below was the cellar where Leonardo used to hide the dead animals he had found. The house was immaculate: how Leonardo's father must have oppressed the less than tidy Francesco and Alessandra to make it ready for Lorenzo and his guests.

Piero's third wife, Margherita di Guglielmo, was nursing his first legitimate son; no doubt that accorded her privileges.

This room was newly fitted-out with covered beds, chests, benches, and a closet cabinet to accommodate several of the lesser luminaries in *Il Magnifico's* entourage. Without a doubt, Leonardo's father would give the First Citizen his own bedroom.

Leonardo sighed. He craved his father's love, but their relationship had always been awkward and rather formal, as if Leonardo were his apprentice rather than his son.

Piero came down the stairs from his chamber above to meet Leonardo. He wore his magisterial robes and a brimless, silk *berretta* cap, as if he were expecting Lorenzo and his entourage at any moment. "Greetings, my son."

"Greetings to you, father," Leonardo said, bowing.

Leonardo and his father embraced. Then, tightly grasping Leonardo's elbow, Piero asked, "May I take you away from your company for a few moments?"

"Of course, Father," Leonardo said politely, allowing himself to be led upstairs.

They entered a writing room, which contained a long, narrow clerical desk, a master's chair, and a sitting bench decorated with two octagonally-shaped pillows; the floor was tiled like a chessboard. A clerk sat upon a stool behind the desk and made a great show of writing in a large, leather-bound ledger. Austere though the room appeared, it revealed a parvenu's taste for comfort; for Piero was eager to be addressed as *messer*, rather than *ser*, and to carry a sword, which was the prerogative of a knight. "Will you excuse us, Vittore?" Piero said to the clerk. The young man rose, bowed, and left the room.

"Yes, father?" Leonardo asked, expecting the worst.

"I don't know whether to scold you or congratulate you."

"The latter would be preferable."

Piero smiled and said, "Andrea has apprised me that *Il Magnifico* has asked for you to work in his gardens."

"Yes."

"I am very proud."

"Thank you, father."

"So you see, I was correct in keeping you to the grindstone."

Leonardo felt his neck and face grow warm. "You mean by taking everything I earned so I could not save enough to pay for my master's matriculation fee in the Painters' Guild?"

"That money went to support the family . . . your family."

"And now you—or rather the family—will lose that income."

"My concern is not, nor was it ever, the money," Piero said. "It was properly forming your character, of which I am still in some doubt."

"Thank you."

"I'm sorry, but as your father, it is my duty—" He paused. Then, as if trying to be more conciliatory, he said, "You could hardly do better than to have Lorenzo for a patron. But he would have never noticed you, if I had not made it possible for you to remain with Andrea."

"You left neither Andrea nor I any choice."

"Be that as it may, Master Andrea made certain that you produced and completed the projects he assigned to you. At least he tried to prevent you from running off and cavorting with your limp-wristed, degenerate friends."

"Ah, you mean those who are not in *Il Magnifico's* retinue."

"Don't you dare to be insolent."

"I apologize, father," Leonardo said, but he had become sullen.

"You're making that face again."

"I'm sorry if I offend you."

"You don't offend me, you—" He paused, then said, "You've put our family in an impossible position."

"What do you mean?"

"Your business here with the Medici."

"It does not please you to host the First Citizen?" Leonardo asked.

"You have made a foolish bet with him, and will certainly become the monkey. Our name—"

"Ah, yes, that is, of course, all that worries you. But I shall not fail, father. You can then take full credit for any honor I might bring to our good name."

"Only birds and insects can fly."

"And those who bear the name da Vinci." But Piero would not be mollified. Leonardo sighed and said, "Father, I shall try not to disappoint you." He bowed respectfully and turned toward the door.

"Leonardo!" his father said, as if he were speaking to a child. "I have not excused you."

"May I be excused, then, father?"

"Yes, you may." But then Piero called him back.

"Yes, father?" Leonardo asked, pausing at the door.

"I forbid you to attempt this . . . experiment."

"I am sorry, father, but I cannot turn tail now."

"I will explain to *Il Magnifico* that you are my first-born."

"Thank you, but—"

"Your safety is my responsibility," Piero said, and then he said, "I worry for you!" Obviously, these words were difficult for him. If their relationship had been structured differently, Leonardo would have crossed the room to embrace his father; and they would have spoken directly. But as robust and lusty as Piero was, he could not accept any physical display of emotion.

After a pause, Leonardo asked, "Will you do me the honor of watching me fly upon the wind?" He ventured a smile. "It will be a da Vinci, not a Medici or a Pazzi, who will be soaring in the heavens closest to God."

"I suppose I shall have to keep up appearances," Piero said; then he raised an eyebrow, as if questioning his place in the scheme of these events. He looked at his son and smiled sadly.

Though once again Leonardo experienced the unbridgeable distance between himself and his father, the tension between them dissolved.

"You are welcome to remain here," Piero said.

"You will have little enough room when Lorenzo and his congregation arrive," Leonardo said. "And I shall need quiet in which to work and prepare; it's been fixed for us to lodge with Achatabriga di Piero del Vacca."

"When are you expected?"

"We should leave now. Uncle Francesco said he would accompany us."

Piero nodded. "Please give my warmest regards to your mother."

"I shall be happy to do so."

"Are you at all curious to see your new brother?" Piero asked, as if it were an afterthought.

"Of course I am, father."

Piero took his son's arm, and they walked to Margherita's bedroom.

Leonardo could feel his father trembling.

And for those few seconds, he actually felt that he was his father's son.

Four

The Great Bird was perched on the edge of a ridge at the summit of a hill near Vinci that Leonardo had selected. It looked like a gigantic dragonfly, its fabric of fustian and silk sighing, as the expansive double wings shifted slightly in the wind. Niccolo, Tista, and Leonardo's stepfather Achatabriga knelt under the wings and held fast to the pilot's harness. Zoroastro da Peretola and Lorenzo de Credi, apprentices of Andrea Verrochio, stood twenty-five feet apart and steadied the wing tips; it almost seemed that their arms were filled with outsized jousting pennons

of blue and gold. These two could be taken as caricatures of *Il Magnifico* and his brother Giuliano, for Zoroastro was swarthy, rough-skinned, and ugly-looking beside the sweetly handsome Lorenzo de Credi. Such was the contrast between Lorenzo and Giuliano di Medici, who stood with Leonardo a few feet away from the Great Bird. Giuliano looked radiant in the morning sun, while Lorenzo seemed to be glowering, although he was most probably simply concerned for Leonardo.

Zoroastro, ever impatient, looked toward Leonardo and shouted, "We're ready for you, Maestro."

Leonardo nodded, but Lorenzo caught him and said, "Leonardo, there is no need for this. I will love you as I do Giuliano, no matter whether you choose to fly . . . or let wisdom win out."

Leonardo smiled and said, "I will fly *fide et amore*."

By faith and love.

"You shall have both," Lorenzo said; and he walked beside Leonardo to the edge of the ridge and waved to the crowd standing far below on the edge of a natural clearing where Leonardo was to land triumphant. But the clearing was surrounded by a forest of pine and cypress, which from his vantage looked like a multitude of rough-hewn lances and halberds. A great shout went up, honoring the First Citizen: the entire village was there—from peasant to squire, invited for the occasion by *Il Magnifico*, who had erected a great, multi-colored tent; his attendants and footmen had been cooking and preparing for a feast since dawn. His sister, Bianca, Angelo Poliziano, Pico Della Mirandola, Bartolomeo Scala, and Leonardo's friend Sandro Botticelli were down there, too, hosting the festivities.

They were all on tenterhooks, eager for the Great Bird to fly.

Leonardo waited until Lorenzo had received his due; but then, not to be outdone, he, too, bowed and waved his arms theatrically. The crowd below cheered their favorite son, and Leonardo turned away to position himself in the harness of his flying machine. He had seen his mother Caterina, a tiny figure nervously looking upward, whispering devotions, her hand cupped above her eyes to cut the glare of the sun. Piero did not speak to Leonardo. His already formidable face was drawn and tight, just as if he were standing before a magistrate awaiting a decision on a case.

Lying down in a prone position on the fore-shortened plank pallet below the wings and windlass mechanism, Leonardo adjusted the loop around his head, which controlled the rudder section of the Great Bird, and he tested the hand cranks and foot stirrups, which raised and lowered the wings.

"Be careful," shouted Zoroastro, who had stepped back from the moving wings. "Are you trying to kill us?"

There was nervous laughter, but Leonardo was quiet. Achattabriglia tied the straps that would hold Leonardo fast to his machine and said, "I shall pray for your success, Leonardo, my son. I love you."

Leonardo turned to his step-father, smelled the good odors of Caterina's herbs—garlic and sweet onion—on his breath and clothes, and looked into the old man's squinting, pale blue eyes; and it came to him then, with the force of buried emotion, that he loved this man who had spent his life sweating by kiln fires and thinking with his great, yellow-nailed hands. "I love you, too . . . father. And I feel safe in your prayers."

That seemed to please Achattabrigha, for he checked the straps one last time, kissed Leonardo and patted his shoulder; then he stepped away, as reverently as if he were backing away from an icon in a cathedral.

"Good luck, Leonardo," Lorenzo said.

The others wished him luck. His step-father nodded, and smiled; and Leonardo, taking the weight of the Great Bird upon his back, lifted himself. Niccolo, Zoroastro, and Lorenzo de Credi helped him to the very edge of the ridge.

A cheer went up from below.

"Maestro, I wish it were me," Niccolo said. Tista stood beside him, looking longingly at Leonardo's flying mechanism.

"Just watch this time, Nicco," Leonardo said, and he nodded to Tista. "Pretend it is you who is flying in the heavens, for this machine is also yours. And you will be with me."

"Thank you, Leonardo."

"Now step away . . . for we must fly," Leonardo said; and he looked down, as if for the first time, as if every tree and upturned face were magnified; every smell, every sound and motion were clear and distinct. In some way the world had separated into its component elements, all in an instant; and in the distance, the swells and juttings of land were like that of a green sea with long, trailing shadows of brown; and upon those motionless waters were all the various constructions of human habitation: church and companile, and shacks and barns and cottages and furrowed fields.

Leonardo felt sudden vertigo as his heart pounded in his chest. A breeze blew out of the northwest, and Leonardo felt it flow around him like a breath. The treetops rustled, whispering, as warm air drifted skyward. Thermal updrafts flowing invisibly to heaven. Pulling at him. His wings shuddered in the gusts; and Leonardo knew that it must be now, lest he be carried off the cliff unprepared.

He launched himself, pushing off the precipice as if he were diving from a cliff into the sea. For an instant, as he swooped downward, he felt euphoria. He was flying, carried by the wind, which embraced him in its cold grip. Then came heart-pounding, nauseating fear. Although he strained at the windlass and foot stirrups, which caused his great, fustian wings to flap, he could not keep himself aloft. His pushings and kickings had become almost reflexive from hours of practice: one leg thrust backward to lower one pair of wings while he furiously worked the windlass with his hands to raise the other, turning his hands first to the left, then to the right. He worked the mechanism with every bit

of his calculated two hundred pound force, and his muscles ached from the strain. Although the Great Bird might function as a glider, there was too much friction in the gears to effect enough propulsive power; and the wind resistance was too strong. He could barely raise the wings.

He fell.

The chilling, cutting wind became a constant sighing in his ears. His clothes flapped against his skin like the fabric of his failing wings, while hills, sky, forest, and cliffs spiraled around him, then fell away; and he felt the damp shock of his recurring dream, his nightmare of falling into the void.

But he was falling through soft light, itself as tangible as butter. Below him was the familiar land of his youth, rising against all logic, rushing skyward to claim him. He could see his father's house, and there in the distance the Apuan Alps, and the ancient cobbled road built before Rome was an empire. His sensations took on the textures of dream; and he prayed, surprising himself even then, as he looked into the purple shadows of the impaling trees below. Still, he doggedly pedaled and turned the windlass mechanism.

All was calmness and quiet, but for the wind wheezing in his ears, like the sea heard in a conch shell. His fear left him, carried away by the same breathing wind.

Then he felt a subtle bursting of warm air around him.

And suddenly, impossibly, vertiginously, he was ascending.

His wings were locked straight out. They were not flapping. Yet still he rose. It was as if God's hand were lifting Leonardo to Heaven; and he, Leonardo, remembered loosing his hawks into the air and watching them search for the currents of wind, which they used to soar into the highest of elevations, their wings motionless.

Thus did Leonardo rise in the warm air current—his mouth open to relieve the pressure constantly building in his ears—until he could see the top of the mountain . . . it was about a thousand feet below him. The country of hills and streams and farmland and forest had diminished, had become a neatly patterned board of swirls and rectangles: proof of man's work on earth. The sun seemed brighter at this elevation, as if the air itself was less dense in these attenuated regions. Leonardo feared now that he might be drawing too close to the region where air turned to fire.

He turned his head, pulling the loop that connected to the rudder; and found that he could, within bounds, control his direction. But then he stopped soaring; it was as if the warm bubble of air that had contained him had suddenly burst. He felt a chill.

The air became cold . . . and still.

He worked furiously at the windlass, thinking that he would beat his wings as birds do until they reach the wind; but he could not gain enough forward motion.

Once again, he fell like an arcing arrow.

Although the wind resistance was so great that he couldn't pull the

wings below a horizontal position, he had developed enough speed to attain lift. He rose for a few beats, but, again, could not push his mechanism hard enough to maintain it, and another gust struck him, pummeling the Great Bird with phantomic fists.

Leonardo's only hope was to gain another warm thermal.

Instead, he became caught in a riptide of air that was like a blast, pushing the flying machine backward. He had all he could do to keep the wings locked in a horizontal position. He feared they might be torn away by the wind; and, indeed, the erratic gusts seemed to be conspiring to press him back down upon the stone face of the mountain.

Time seemed to slow for Leonardo; and in one long second he glimpsed the clearing surrounded by forest, as if forming a bull's-eye. He saw the tents and the townspeople who craned their necks to goggle up at him; and in this wind-wheezing moment, he suddenly gained a new, unfettered perspective. As if it were not he who was falling to his death.

Were his neighbors cheering? he wondered. Or were they horrified and dumbfounded at the sight of one of their own falling from the sky? More likely they were secretly wishing him to fall, their deepest desires not unlike the crowd that had recently cajoled a poor, lovesick peasant boy to jump from a rooftop onto the stone pavement of the Via Calimala.

The ground was now only three hundred feet below. A hawk was caught in the same trap of wind as Leonardo; and as he watched, the bird veered away, banking, and flew downwind. Leonardo shifted his weight, manipulated the rudder, and changed the angle of the wings. Thus he managed to follow the bird. His arms and legs felt like leaden weights, but he held on to his small measure of control.

Still he fell.

Two hundred feet.

He could hear the crowd shouting below him as clearly as if he were among them. People scattered, running to get out of Leonardo's way. He thought of his mother Caterina, for most men call upon their mothers at the moment of death.

And he followed the hawk, as if it were his inspiration, his own Beatrice.

And the ground swelled upward.

Then Leonardo felt as if he was suspended over the deep, green canopy of forest, but only for an instant. He felt a warm swell of wind; and the Great Bird rose, riding the thermal. Leonardo looked for the hawk, but it had disappeared as if it had been a spirit, rising without weight through the various spheres toward the *Primum Mobile*. He tried to control his flight, his thoughts toward landing in one of the fields beyond the trees.

The thermal carried him up; then, just as quickly, as if teasing him, burst. Leonardo tried to keep his wings fixed, and glided upwind for a few seconds. But a gust caught him, once again pushing him backward, and he fell—

Slapped back to earth.

Hubris.

I have come home to die.

His father's face scowled at him.

Leonardo had failed.

Five

Even after three weeks, the headaches remained.

Leonardo had suffered several broken ribs and a concussion when he fell into the forest, swooping between the thick, purple cypress trees, tearing like tissue the wood and fustaneum of the Great Bird's wings. His face was already turning black when Lorenzo's footmen found him. He recuperated at his father's home; but Lorenzo insisted on taking him to Villa Careggi, where he could have his own physicians attend to him. With the exception of Lorenzo's personal dentator, who soaked a sponge in opium, morel juice, and hyoscyamus and extracted his broken tooth as Leonardo slept and dreamed of falling, they did little more than change his bandages, bleed him with leeches, and cast his horoscope.

Leonardo was more than relieved when the plague finally abated enough so that he could return to Florence. He was hailed as a hero, for Lorenzo had made a public announcement from the *ringhiera* of the Palazzo Vecchio that the artist from Vinci had, indeed, flown in the air like a bird. But the gossip among the educated was that, instead, Leonardo had fallen like Icarus, whom it was said he resembled in hubris. He received an anonymous note that seemed to say it all: *victus honor*.

Honor to the vanquished.

Leonardo would accept none of the countless invitations to attend various masques and dinners and parties. He was caught up in a frenzy of work. He could not sleep; and when he would lose consciousness from sheer exhaustion, he would dream he was falling through the sky. He would see trees wheeling below him, twisting as if they were machines in an impossible torture chamber.

Leonardo was certain that the dreams would cease only when he conquered the air; and although he did not believe in ghosts or superstition, he was pursued by demons every bit as real as those conjured by the clergy he despised and mocked. So he worked, as if in a frenzy. He constructed new models and filled up three folios with his sketches and mirror-script notes. Niccolo and Tista would not leave him, except to bring him food, and Andrea Verrocchio came upstairs a few times a day to look in at his now famous apprentice.

"Haven't you yet had your bellyful of flying machines?" Andrea impatiently asked Leonardo. It was dusk, and dinner had already been served to the apprentices downstairs. Niccolo hurried to clear a place on the table so Andrea could put down the two bowls of boiled meat he had brought. Leonardo's studio was in its usual state of disarray, but the old flying machine, the insects mounted on boards, the vivisected birds and

bats, the variously designed wings, rudders, and valves for the Great Bird were gone, replaced by new drawings, new mechanisms for testing wing designs (for now the wings would remain fixed), and various large-scale models of free-flying whirlybird toys, which had been in use since the 1300s. He was experimenting with inverted cones—Archimedian Screws—to cheat gravity, and he studied the geometry of children's tops to calculate the principle of the fly-wheel. Just as a ruler whirled rapidly in the air will guide the arm by the line of the edge of the flat surface, so did Leonardo envision a machine powered by a flying propeller. Yet he could not help but think that such mechanisms were against nature, for air was a fluid, like water. And nature, the protoplast of all man's creation, had not invented rotary motion.

Leonardo pulled the string of a toy whirlybird, and the tiny four-bladed propeller spun into the air, as if in defiance of all natural laws. "No, Andrea, I have not lost my interest in this most sublime of inventions. *Il Magnifico* has listened to my ideas, and he is enthusiastic that my next machine will remain aloft."

Verrocchio watched the red propeller glide sideways into a stack of books: *De Onesta Volutta* by Il Platina, the *Letters of Filefo*, Pliny's *Historia naturale*, Dati's *Trattato della sfera*, and Ugo Benzo's *On the Preservation of the Health*. "And Lorenzo has offered to recompense you for these . . . experiments?"

"Such an invention would revolutionize the very nature of warfare," Leonardo insisted. "I've developed an exploding missile that looks like a dart and could be dropped from my Great Bird. I've also been experimenting with improvements on the arquebus, and I have a design for a giant *ballista*, a cross-bow of a kind never before imagined. I've designed a cannon with many racks of barrels that—"

"Indeed," Verrocchio said. "But I have advised you that it is unwise to put your trust in Lorenzo's momentary enthusiasms."

"Certainly the First Citizen has more than a passing interest in armaments."

"Is that why he ignored your previous memorandum wherein you proposed the very same ideas?"

"That was before, and this is now."

"Ah, certainly," Andrea said, nodding his head. Then after a pause, he said, "Stop this foolishness, Leonardo. You're a painter, and a painter should *paint*. Why have you been unwilling to work on any of the commissions I have offered you? And you've refused many other good offers. You have no money; and you've gained yourself a bad reputation."

"I will have more than enough money after the world watches my flying machine soar into the heavens."

"You are lucky to be alive, Leonardo! Have you not looked at yourself in a mirror? And you nearly broke your spine. Are you so intent upon doing so again? Or will killing yourself suffice?" He shook his head, as if angry at himself. "You've become skinny as a rail and sallow as an old man. Do you eat what we bring you? Do you sleep? Do you *paint*? No,

nothing but invention, nothing but . . . *this*." He waved his arm at the models and mechanisms that lay everywhere. Then in a soft voice, he said, "I blame myself. I should have never allowed you to proceed with all this in the first place. You need a strong hand."

"When Lorenzo sees what I have—"

Andrea made a tssing sound by tapping the roof of his mouth with his tongue. "I bid thee goodnight. Leonardo, eat your food before it gets cold. Niccolo, see that he eats."

"Andrea?" Leonardo said.

"Yes?"

"What has turned you against me?"

"My love for you. . . . Forget invention and munitions and flying toys! You are a *painter*. Paint!"

"I cannot," Leonardo answered, but in a voice so low that no one else could hear.

Six

"Stop it, that hurts!" Tista said to Niccolo, who had pulled him away from Leonardo's newest flying machine and held his arm behind him, as if to break it.

"Do you promise to stay away from the Maestro's machine?" Niccolo asked.

"Yes, I promise."

Niccolo let go of the boy, who backed nervously away from him. Leonardo stood a few paces away, oblivious to them, and stared down the mountainside to the valley below. Mist flowed dreamlike down its grassy slopes; in the distance, surrounded by grayish-green hills, was Florence, its Duomo and the high tower of the Palazzo Vecchio golden in the early sunlight. It was a brisk morning in early March, but it would be a warm day. The vapor from Leonardo's exhalations was faint. He had come here to test his glider, which now lay nearby, its large, arched wings lashed to the ground. Leonardo had taken Niccolo's advice. This flying machine had fixed wings and no motor. It was a glider. His plan was to master flight; when he developed a suitable engine to power his craft, he would then know how to control it. And this machine was more in keeping with Leonardo's ideas of nature, for he would wear the wings, as if he were, indeed, a bird; he would hang from the wings, legs below, head and shoulders above, and control them by swinging his legs and shifting his weight. He would be like a bird soaring, sailing, gliding.

But he had put off flying the contraption for the last two days that they had camped here. Even though he was certain that its design was correct, he had lost his nerve. He was afraid. He just could not do it.

But he *had* to. . . .

He could feel Niccolo and Tista watching him.

He kicked at some loamy dirt, and decided that he would do it now.

He would not think about it. If he was to die . . . then so be it. Could falling out of the sky be worse than being a coward?

But he was too late, too late by a breath.

Niccolo shouted.

Startled, Leonardo turned to see that Tista had torn loose the rope that anchored the glider to the ground and had pulled himself through the opening between the wings. Leonardo shouted "Stop!" and rushed toward him, but Tista threw himself over the crest before either Leonardo or Niccolo could stop him. In fact, Leonardo had to grab Niccolo, who almost fell from the mountain in pursuit of his friend.

Tista's cry carried through the chill, thin air, but it was a cry of joy as the boy soared through the empty sky. He circled the mountain, catching the warmer columns of air, and then descended.

"Come back," Leonardo shouted through cupped hands, yet he could not help but feel an exhilaration, a thrill. The machine worked! But it was he, Leonardo, who needed to be in the air.

"Maestro, I tried to stop him!" Niccolo cried.

But Leonardo ignored him, for the weather suddenly changed, and buffeting wind began to whip around the mountain. "Stay away from the slope!" Leonardo called. But he could not be heard; and he watched helplessly as the glider pitched upward, caught by a gust. It stalled in the chilly air, and then fell like a leaf. "Swing your hips forward!" Leonardo shouted. The glider could be brought under control. If the boy were practiced, it would not be difficult at all. But he wasn't, and the glider slid sideways, crashing into the mountain.

Niccolo screamed, and Leonardo discovered that he, too, was screaming.

Tista was tossed out of the harness. Grabbing at brush and rocks, he fell about fifty feet.

By the time Leonardo reached him, the boy was almost unconscious. He lay between two jagged rocks, his head thrown back, his back twisted, arms and legs akimbo.

"Where do you feel pain?" Leonardo asked as he tried to make the boy as comfortable as he could. There was not much that could be done, for Tista's back was broken, and a rib had pierced the skin. Niccolo knelt beside Tista; his face was white, as if drained of blood.

"I feel no pain, Maestro. Please do not be angry with me." Niccolo took his hand.

"I am not angry, Tista. But why did you do it?"

"I dreamed every night that I was flying. In your contraption, Leonardo. The very one. I could not help myself. I planned how I would do it." He smiled wanly. "And I did it."

"That you did," whispered Leonardo, remembering his own dream of falling. Could one dreamer affect another?

"Niccolo . . .?" Tista called in barely a whisper.

"I am here."

"I cannot see very well. I see the sky, I think."

Niccolo looked to Leonardo, who could only shake his head.

When Tista shuddered and died, Niccolo began to cry and beat his hands against the sharp rocks, bloodying them. Leonardo embraced him, holding his arms tightly and rocking him back and forth as if he were a baby. All the while he did so, he felt revulsion; for he could not help himself, he could not control his thoughts, which were as hard and cold as reason itself.

Although his flying machine had worked—or *would* have worked successfully, if he, Leonardo, had taken it into the air—he had *another* idea for a Great Bird.

One that would be safe.

As young Tista's inchoate soul rose to the heavens like a kite in the wind, Leonardo imagined just such a machine.

A child's kite. . . .

"So it is true, you are painting," Andrea Verrocchio said, as he stood in Leonardo's studio. Behind him stood Niccolo and Sandro Botticelli.

Although the room was still cluttered with his various instruments and machines and models, the tables had been cleared, and the desiccated corpses of birds and animals and insects were gone. The ripe odors of rot were replaced with the raw, pungent fumes of linseed oil and varnish and paint. Oil lamps inside globes filled with water—another of Leonardo's inventions—cast cones of light in the cavernous room; he had surrounded himself and his easel with the brightest of these watery lamps, which created a room of light within the larger room that seemed to be but mere appearance.

"But what kind of painting is *this*?" Andrea asked. "Did the Anti-Christ need to decorate the dark walls of his church? I could believe that only he could commission such work!"

Leonardo grimaced and cast an angry look at Niccolo for bringing company into his room when he was working. Since Tista had died, he had taken to sleeping during the day and painting all night. He turned to Verrocchio. "I'm only following your advice, Maestro. You said that a painter paints."

"Indeed, I did. But a painter does not paint for himself, in the darkness, as you are doing." Yet even as he spoke, he leaned toward the large canvas Leonardo was working on, casting his shadow over a third of it. He seemed fascinated with the central figure of a struggling man being carried into Hell by the monster Geryon; man and beast were painted with such depth and precision that they looked like tiny live figures trapped in amber. The perspective of the painting was dizzying, for it was a glimpse into the endless shafts and catacombs of Hell; indeed, Paolo Ucello, may he rest in peace, would have been proud of such work, for he had lived for the beauties of perspective.

"Leonardo, I have called upon you twice . . . why did you turn me away?" Sandro asked. "And why have you not responded to any of my letters?" He looked like a younger version of Master Andrea, for he had

the same kind of wide, fleshy face, but Botticelli's jaw was stronger; and while Verrocchio's lips were thin and tight, Sandro's were heavy and sensuous.

"I have not received anyone," Leonardo said, stepping out of the circle of light. Since Tista was buried, his only company was Niccolo, who would not leave his master.

"And neither have you responded to the invitations of the First Citizen," Verrocchio said, meaning Lorenzo de Medici.

"Is that why you're here?" Leonardo asked Sandro. Even in the lamplight, he could see a blush in his friend's cheeks, for he was part of the Medici family; Lorenzo loved him as he did his own brother, Giuliano.

"I'm here because I'm worried about *you*, as is Lorenzo. You have done the same for me, or have you forgotten?"

No, Leonardo had not forgotten. He remembered when Sandro had almost died of love for Lorenzo's mistress, Simonetta Vespucci. He remembered how Sandro had lost weight and dreamed even when he was awake; how Pico Della Mirandola had exorcised him in the presence of Simonetta and Lorenzo; and how he, Leonardo, had taken care of him until he regained his health.

"So you think I am in need of Messer Mirandola's services?" Leonardo asked. "Is that it?"

"I think you need to see your friends. I think you need to come awake in the light and sleep in the night. I think you must stop grieving for the child Tista."

Leonardo was about to respond, but caught himself. He wasn't grieving for Tista. Niccolo was, certainly. But he, Leonardo, was simply working.

Working through his fear and guilt and . . .

Grief.

For it was, somehow, as if *he* had fallen and broken his spine, as perhaps, he should have when he fell from the mountain ledge as a child.

"Leonardo, why are you afraid?" Niccolo asked. "The machine . . . worked. It *will* fly."

"And so you wish to fly it, too?" Leonardo asked, but it was more a statement than a question; he was embarrassed and vexed that Niccolo would demean him in front of Verrocchio.

But, indeed, the machine *had* worked.

"I am going back to bed," Verrocchio said, bowing to Sandro. "I will leave you to try to talk sense into my apprentice." He looked at Leonardo and smiled, for both knew that he was an apprentice in name only. But Leonardo would soon have to earn his keep; for Verrocchio's patience was coming to an end. He gazed at Leonardo's painting. "You know, the good monks of St. Bernard might just be interested in such work as this. Perhaps I might suggest that they take your painting instead of the altarpiece you owe them."

Leonardo could not help but laugh, for he knew that his master was serious.

After Verrocchio left, Leonardo and Sandro sat down on a cassone

together under one of the dirty high windows of the studio; Niccolo sat before them on the floor; he was all eyes and ears and attention.

"Nicco, bring us some wine," Leonardo said.

"I want to be *here*."

Leonardo did not argue with the boy. It was unimportant, and once the words were spoken, forgotten. Leonardo gazed upward. He could see the sky through the window; the stars were brilliant, for Florence was asleep and its lanterns did not compete with the stars. "I thought I could get so close to them," he said, as if talking to himself. He imagined the stars as tiny pricks in the heavenly fabric; he could even now feel the heat from the region of fire held at bay by the darkness; and as if he could truly see through imagination, he watched himself soaring in his flying machine, climbing into the black heavens, soaring, reaching to burn like paper for one glorious instant into those hot, airy regions above the clouds and night.

But this flying machine he imagined was like no other device he had ever sketched or built. He had reached beyond nature to conceive a child's kite with flat surfaces to support it in the still air. Like his dragonfly contraption, it would have double wings, cellular open-ended boxes that would be as stable as kites of like construction.

Stable . . . and safe.

The pilot would not need to shift his balance to keep control. He would float on the air like a raft. Tista would not have lost his balance and fallen out of the sky in this contraption.

"Leonardo . . . *Leonardo!* Have you been listening to anything I've said?"

"Yes, Little Bottle, I hear you." Leonardo was one of a very small circle of friends who was permitted to call Sandro by his childhood nickname.

"Then I can tell Lorenzo that you will demonstrate your new flying machine? It would not be wise to refuse him, Leonardo. He has finally taken notice of you. He needs you now; his enemies are everywhere."

Leonardo nodded.

Indeed, the First Citizen's relationship with the ambitious Pope Sixtus IV was at a breaking-point, and all of Florence lived in fear of excommunication and war.

"Florence must show its enemies that it is invincible," Sandro continued. "A device that can rain fire from the sky would deter even the Pope!"

"I knew that Lorenzo could not long ignore my inventions," Leonardo said, although he was surprised.

"He plans to elevate you to the position of Master of Engines and Captain of Engineers."

"Should I thank you for this, Little Bottle?" Leonardo asked. "Lorenzo would have no reason to think that my device would work. Rather the opposite, as it killed my young apprentice."

"God rest his soul," Sandro said.

Leonardo continued. "Unless someone whispered in Lorenzo's ear. I fear you have gone from being artist to courtier, Little Bottle."

"The honors go to Niccolo," Sandro said. "It is he who convinced Lorenzo."

"This is what you've been waiting for, Maestro," Niccolo said. "I will find Francesco at first light and tell him to help you build another Great Bird. And I'll get the wine right now."

"Wait a moment," Leonardo said, then directed himself to Sandro. "How did Nicco convince Lorenzo?"

"You sent me with a note for the First Citizen, Maestro, when you couldn't accept his invitation to attend Simonetta's ball," Niccolo said. "I told him of our grief over Tista, and then I also had to explain what had happened. Although I loved Tista, *he* was at fault. Not our machine. . . . Lorenzo understood."

"Ah, did he now?"

"I only did as you asked," Niccolo insisted.

"And did you speak to him about my bombs?" Leonardo asked.

"Yes, Maestro."

"And did he ask you, or did you volunteer this information?"

Niccolo glanced nervously at Sandro, as if he would supply him with the answer. "I thought you would be pleased. . . ."

"I think you may get the wine now," Sandro said to Niccolo, who did not miss the opportunity to flee. Then he directed himself to Leonardo. "You should have congratulated Niccolo, not berated him. Why were you so hard on the boy?"

Leonardo gazed across the room at his painting in the circle of lamps. He desired only to paint, not construct machines to kill children; he would paint his dreams, which had fouled his waking life with their strength and startling detail. By painting them, by exposing them, he might free himself. Yet ideas for his great Kite seemed to appear like chiaroscuro on the painting of his dream of falling, as if it were a notebook.

Leonardo shivered, for his dreams had spilled out of his sleep and would not let him go. Tonight, they demanded to be painted.

Tomorrow, they would demand to be *built*.

He yearned to step into the cold, perfect spaces of his memory cathedral, which had become his haven. There he could imagine each painting, each dream, and lock it in its own dark, private room. As if every experience, every pain, could be so isolated.

"Well . . .?" Sandro asked.

"I will apologize to Niccolo when he returns," Leonardo said.

"Leonardo, was Niccolo right? Are you are afraid? I'm your best friend, certainly you can—"

Just then Niccolo appeared with a bottle of wine.

"I am very tired, Little Bottle," Leonardo said. "Perhaps we can celebrate another day. I will take your advice and sleep . . . to come awake in the light."

That was, of course, a lie, for Leonardo painted all night and the next day. It was as if he had to complete a month's worth of ideas in a few

hours. Ideas seemed to explode in his mind's eye, paintings complete; all that Leonardo had to do was trace them onto canvas and mix his colors. It was as if he had somehow managed to unlock doors in his memory cathedral and glimpse what St. Augustine had called the present of things future; it was as if he were glimpsing ideas he *would* have, paintings he *would* paint; and he knew that if he didn't capture these gifts now, he would lose them forever. Indeed, it was as if he were dreaming whilst awake, and, during these hours, whether awake or slumped over before the canvas in a catnap or a trance, he had no control over the images that glowed in his mind like the lanterns placed on the floor, cassones, desks, and tables around him, rings of light, as if everything were but different aspects of Leonardo's dream . . . Leonardo's conception. He worked in a frenzy, which was always how he worked when his ideas caught fire; but this time he had no conscious focus or goal. Rather than a frenzy of discovery, this was a kind of remembering.

By morning, he had six paintings under way; one was a Madonna, transcendently radiant, as if Leonardo had lifted the veil of human sight to reveal the divine substance. The others seemed to be grotesque visions of hell that would only be matched by a young Dutch contemporary of Leonardo's: Hieronymus Bosch. There was a savage cruelty in these pictures of fabulous monsters with gnashing snouts, bat's wings, crocodile's jaws, and scaly pincered tails, yet every creature, every caricature and grotesquerie had a single haunting human feature: chimeras with soft, sad human eyes or womanly limbs or the angelic faces of children, taunting and torturing the fallen in the steep, dark mountainous wastes of Hell.

As promised, Niccolo fetched Verrocchio's foreman Francesco to supervise the rebuilding of Leonardo's flying machine; but not at first light, as he had promised, for the exhausted Niccolo had slept until noon. Leonardo had thought that Niccolo was cured of acting independently on his master's behalf, but obviously the boy was not contrite, for he had told Leonardo that he was going downstairs to bring back some meat and fruit for lunch and returned with Francesco.

But Leonardo surprised both of them by producing a folio of sketches, diagrams, plans, and design measurements for kites and for two-and-three winged soaring machines. Some had curved surfaces, some had flat surfaces; but all these drawings and diagrams were based on the idea of open-ended boxes . . . groups of them placed at the ends of timber spars. There were detailed diagrams of triplane and biplane gliders, with wing span and supporting surface measurements; even on paper, these machines looked awkward and heavy and bulky, for they did not imitate nature. He had tried imitation, but nature was capricious, unmanageable. Now he would *conquer* it. *Vince la natura*. Not even Tista could fall from these rectangular rafts. Leonardo had scribbled notes below two sketches of cellular kites, but not in his backward script; this was obviously meant to be readable to others: *Determine whether kite with cambered wings will travel farther. Fire from crossbow to ensure accuracy.*

And on another page, a sketch of three kites flying in tandem, one above the other, and below a figure on a sling seat: *Total area of surface sails 476 ells. Add kites with sails of 66 ells to compensate for body weight over 198 pounds. Shelter from wind during assembly, open kites one at a time, then pull away supports to allow the wind to get under the sails. Tether the last kite, lest you be carried away.*

"Can you produce these kites for me by tomorrow?" Leonardo asked Francesco, as he pointed to the sketch. "I've provided all the dimensions."

"Impossible," Francesco said. "Perhaps when your flying machine for the First Citizen is finished—"

"This *will* be for the First Citizen," Leonardo insisted.

"I was instructed to rebuild the flying machine in which young Tista was . . . in which he suffered his accident."

"By whom? Niccolo?"

"Leonardo, Maestro Andrea has interrupted work on the altarpiece for the Chapel of Saint Bernard to build your contraption for the First Citizen. When that's completed, I'll help you build these . . . kites."

Leonardo knew Francesco well; he wouldn't get anywhere by cajoling him. He nodded and sat down before the painting of a Madonna holding the Christ, who, in turn, was holding a cat. The painting seemed to be movement itself.

"Don't you wish to supervise the work, Maestro?" asked the foreman.

"No, I'll begin constructing the kites, with Niccolo."

"Maestro, Lorenzo expects us—you—to demonstrate your Great Bird in a fortnight. You and Sandro agreed."

"Sandro is not the First Citizen." Then after a pause, "I have better ideas for soaring machines."

"But they cannot be built in time, Maestro," Niccolo insisted.

"Then no machine will be built."

And with that, Leonardo went back to his painting of the Madonna, which bore a sensual resemblance to Lorenzo's mistress Simonetta.

Which would be a gift for Lorenzo.

Seven

After a short burst of pelting rain, steady winds seemed to cleanse the sky of the gray storm clouds that had suffocated the city for several days. It had also been humid, and the air, which tasted dirty, had made breathing difficult. Florentine citizens closed their shutters against the poisonous miasmas, which were currently thought to be the cause of the deadly buboes, and were, at the very least, ill omens. But Leonardo, who had finally completed building his tandem kites after testing design after design, did not even know that a disaster had befallen Verrocchio's bottega when rotten timbers in the roof gave way during the storm. He and Niccolo had left to test the kites in a farmer's field nestled in a windy valley that also afforded privacy. As Leonardo did not want Zoroastro or

Lorenzo de Credi, or anyone else along, he designed a sled so he could haul his lightweight materials himself.

"Maestro, are you going to make your peace with Master Andrea?" Niccolo asked as they waited for the mid-morning winds, which were the strongest. The sky was clear and soft and gauzy blue, a peculiar atmospheric effect seen only in Tuscany; Leonardo had been told that in other places, especially to the north, the sky was sharper, harder.

"I will soon start a bottega of my own," Leonardo said, "and be the ruler of my own house."

"But we need money, Maestro."

"We'll have it."

"Not if you keep the First Citizen waiting for his Great Bird," Niccolo said; and Leonardo noticed that the boy's eyes narrowed, as if he were calculating a mathematical problem. "Maestro Andrea will certainly have to tell Lorenzo that your Great Bird is completed."

"Has he done so?" Leonardo asked.

Niccolo shrugged.

"He will be even more impressed with my new invention. I will show him before he becomes too impatient. But I think it is Andrea, not Lorenzo, who is impatient."

"You're going to show the First Citizen *this*?" Niccolo asked, meaning the tandem kites, which were protected from any gusts of wind by a secured canvas; the kites were assembled, and when Leonardo was ready, would be opened one at a time.

"If this works, then we will build the Great Bird as I promised. That will buy us our bottega and Lorenzo's love."

"He loves you already, Maestro, as does Maestro Andrea."

"Then they'll be patient with me."

Niccolo was certainly not above arguing with his master; he had, indeed, become Leonardo's confidant. But Leonardo didn't give him a chance. He had been checking the wind, which would soon be high. "Come help me, Nicco, and try not to be a philosopher. The wind is strong enough. If we wait it will become too gusty and tear the kites." This had already happened to several of Leonardo's large scale models.

Leonardo let the wind take the first and smallest of the kites, but the wind was rather puffy, and it took a few moments before it pulled its thirty pounds on the guy rope. Then, as the wind freshened, he let go another. Satisfied, he anchored the assembly, making doubly sure that it was secure, and opened the third and largest kite. "Hold the line tight," he said to Niccolo as he climbed onto the sling seat and held tightly to a restraining rope that ran through a block and tackle to a makeshift anchor of rocks.

Leonardo reassured himself that he was safely tethered, and reminded himself that the cellular box was the most stable of constructions. Its flat surfaces would support it in the air. Nevertheless, his heart seemed to be pulsing in his throat, he had difficulty taking a breath, and he could feel the chill of his sweat on his chest and arms.

The winds were strong, but erratic, and Leonardo waited until he could feel the wind pulling steady; he leaned backward, sliding leeward on the seat to help the wind get under the supporting surface of the largest kite. Then suddenly, as if some great heavenly hand had grabbed hold of the guy ropes and the kites and snapped them, Leonardo shot upward about twenty feet. But the kites held steady at the end of their tether, floating on the wind like rafts on water.

How different this was from the Great Bird, which was so sensitive—and susceptible—to every movement of the body. Leonardo shifted his weight, and even as he did so, he prayed; but the kites held in the air. Indeed, they were rafts. The answer was ample supporting surfaces.

Vince la natura.

The wind lightened, and he came down. The kites dragged him forward; he danced along the ground on his toes before he was swept upward again. Niccolo was shouting, screaming, and hanging from the restraining rope, as if to add his weight, lest it pull away from the rock anchor or pull the rocks heavenward.

When the kites came down for the third time, Leonardo jumped from the sling seat, falling to the ground. Seconds later, as if slapped by the same hand that had pulled them into the sky, the kites crashed, splintering, as their sails snapped and fluttered, as if still yearning for the airy heights.

"Are you all right, Maestro?" Niccolo shouted, running toward Leonardo.

"Yes," Leonardo said, although his back was throbbing in pain and his right arm, which he had already broken once before, was numb. But he could move it, as well as all his fingers. "I'm fine." He surveyed the damage. "Let's salvage what we can."

They fastened the broken kites onto the sled and walked through wildflower-dotted fields and pastures back to the bottega. "Perhaps now, Maestro, you'll trust your original Great Bird," Niccolo said. "You mustn't bury it with Tista."

"What are you talking about?" Leonardo asked.

"These kites are too . . . dangerous. They're completely at the mercy of the wind; they dragged you along the ground; and you almost broke your arm. Isn't that right, Maestro?"

Leonardo detected a touch of irony in Niccolo's voice. So the boy was having it up on his master. "Yes," Leonardo said. "And what does that prove?"

"That you should give this up."

"On the contrary, Nicco. This experiment has only proven how safe my new Great Bird will be."

"But you—"

Leonardo showed Niccolo his latest drawing of a biplane based on his idea of open-ended boxes placed at the ends of timber spars.

"How could such a thing fly?" Niccolo asked.

"That's a soaring machine safe enough for Lorenzo himself. If I could

show the First Citizen that he could command the very air, do you think he would regret the few days it will take to build and test the new machine?"

"I think it looks very dangerous . . . and I think the kites are very dangerous, Maestro."

Leonardo smiled at Niccolo. "Then at least after today you no longer think I am a coward."

"Maestro, I *never* thought that."

But even as they approached the city, Leonardo could feel the edges of his dream, the dark edges of nightmare lingering; and he knew that tonight it would return.

The dream of falling. The dream of flight.

Tista. . . .

He would stay up and work. He would not sleep. He would not dream. But the dream spoke to him even as he walked, told him *it* was nature and would not be conquered. And Leonardo could feel himself.

Falling.

If Leonardo were superstitious, he would have believed it was a sign.

When the roof of Verrocchio's bottega gave way, falling timber and debris destroyed almost everything in Leonardo's studio; and the pelting rain ruined most of what might have been salvaged. Leonardo could rewrite his notes, for they were safe in the altar of his memory cathedral; he could rebuild models and replenish supplies, but his painting of the Madonna—his gift for Lorenzo—was destroyed. The canvas torn, the oils smeared, and the still-sticky varnish surface spackled with grit and filth. Most everything but the three paintings of his nightmare-descent into Hell was destroyed. Those three had been placed against the inner wall of the studio, a triptych of dark canvases, exposed, the varnish still sticky, protected by a roll of fabric that had fallen over them. And in every one of them Leonardo could see himself as a falling or fallen figure.

The present of the future.

"Don't you think this is a sign from the gods?" Niccolo asked after he and Leonardo had salvaged what they could and moved into another studio in Verrocchio's bottega.

"Do you now believe in the Greeks' pantheon?" Leonardo asked.

Looking flustered, Niccolo said, "I only meant—"

"I know what you meant." Leonardo smiled tightly. "Maestro Andrea might get his wish . . . he might yet sell those paintings to the good monks. In the meantime, we've got work to do, which we'll start at first light."

"We can't build your Great Bird alone," Niccolo insisted.

"Of course we can. And Francesco will allocate some of his apprentices to help us."

"Maestro Andrea won't allow it."

"We'll see," Leonardo said.

"Maestro, your Great Bird is *already* built. It is ready, and Lorenzo expects you to fly it."

"Would that the roof fell upon it." Leonardo gazed out the window into the streets. The full moon illuminated the houses and bottegas and shops and palazzos in weak gray light that seemed to be made brighter by the yellow lamplight trembling behind vellum-covered windows. He would make Lorenzo a model of his new soaring machine, his new Great Bird; but he would not see the First Citizen until it was built and tested. Indeed, he stayed up the night, redrawing his designs, reworking his ideas, as if the destruction of his studio had been a blessing. He sketched cellular box kite designs that he combined into new forms for gliding machines, finally settling on a design based almost entirely on the rectangular box kite forms. He had broken away from the natural bird-like forms, yet this device was not unnatural in its simplicity. He detailed crosshatch timber braces, which would keep his cellular wing surfaces tight. He made drawings and diagrams of the cordage. The pilot would sit in a sling below the double wings, which were webbed as the masts of a sailing vessel; and the rudder would be attached to long spars that stretched behind him at shoulder height. A ship to sail into the heavens.

Tomorrow he would build models to test his design. To his mind, the ship was already built, for it was as tangible as the notebook he was staring into.

Notebook in hand, he fell asleep, for he had been but little removed from dreams; and dream he did, dreams as textured and deep and tinted as memory. He rode his Great Bird through the moonlit night, sailed around the peaks of mountains as if they were islands in a calm, warm sea; and the winds carried him, carried him away into darkness, into the surfaces of his paintings that had survived the rain and roof, into the brushstroked chiaroscuro of his imagined hell.

Eight

"Tell Lorenzo that I'll have a soaring machine ready to impress the archbishop when he arrives," Leonardo said. "But he's not due for a fortnight."

"You've taken too long already." Sandro Botticelli stood in Leonardo's new studio, which was small and in disarray; although the roof had been repaired, Leonardo did not want to waste time moving back into his old room. Sandro was dressed as a dandy, in red and green, with dags and a peaked cap pulled over his thick brown hair. It was a festival day, and the Medici and their retinue would take to the streets for the Palio, the great annual horse race. "Lorenzo sent me to drag you to the Palio, if need be."

"If Andrea had allowed Francesco to help me—or at least lent me a few apprentices—I would have it finished by now."

"That's not the point."

"That's exactly the point."

"Get out of your smock; you must have something that's not covered with paint and dirt."

"Come, I'll show you what I've done," Leonardo said. "I've put up canvas outside to work on my soaring machine. It's like nothing you've ever seen, I promise you that. I'll call Niccolo, he'll be happy to see you."

"You can show it to me on our way, Leonardo. Now get dressed. Niccolo has left long ago."

"What?"

"Have you lost touch with everyone and everything?" Sandro asked. "Niccolo is at the Palio with Andrea . . . who is with Lorenzo. Only you remain behind."

"But Niccolo was just here."

Sandro shook his head. "He's been there for most of the day. He said he begged you to accompany him."

"Did he tell that to Lorenzo, too?"

"I think you can trust your young apprentice to be discreet."

Dizzy with fatigue, Leonardo sat down by a table covered with books and models of kites and various incarnations of his soaring machine.

"Yes, of course, you're right, Little Bottle."

"You look like you've been on a binge. You've got to start taking care of yourself, you've got to start sleeping and eating properly. If you don't, you'll lose everything, including Lorenzo's love and attention. You can't treat him as you do the rest of your friends. I thought you wanted to be his Master of Engineers?"

"What else has Niccolo been telling you?"

Sandro shook his head in a gesture of exasperation, and said, "Change your clothes, dear friend. We haven't more than an hour before the race begins."

"I'm not going," Leonardo said, his voice flat. "Lorenzo will have to wait until my soaring machine is ready."

"He will not wait."

"He has no choice."

"He has your Great Bird, Leonardo."

"Then Lorenzo can fly it! Perhaps he will suffer the same fate as Tista. Better yet, he should order Andrea to fly it. After all, Andrea had it built for him."

"Leonardo . . ."

"It killed Tista. . . . It's not safe."

"I'll tell Lorenzo you're ill," Sandro said.

"Send Niccolo back to me. I forbid him to—"

But Sandro had already left the studio, closing the large inlaid door behind him.

Exhausted, Leonardo leaned upon the table and imagined that he had followed Sandro to the door, down the stairs, and outside. There he surveyed his canvas-covered makeshift workshop. The air was hot and stale in the enclosed space. It would take weeks working alone to complete

the new soaring machine. Niccolo should be there. Then Leonardo began working at the cordage to tighten the supporting wing surfaces. *This machine will be safe*, he thought; and he worked, even in the dark exhaustion of his dreams, for he had lost the ability to rest.

Indeed, he was lost.

In the distance, he could hear Tista. Could hear the boy's triumphant cry before he fell and snapped his spine. And he heard thunder. Was it the shouting of the crowd as he, Leonardo, fell from the mountain near Vinci? Was it the crowd cheering the Palio riders racing through the city? Or was it the sound of his own dream-choked breathing?

"Leonardo, they're going to fly your machine!"

"What?" Leonardo asked, surfacing from deep sleep; his head ached and his limbs felt weak and light, as if he had been carrying heavy weights.

Francesco stood over him, and Leonardo could smell the man's sweat and the faint odor of garlic. "One of my boys came back to tell me . . . as if *I'd* be rushing into crowds of cutpurses to see some child die in your flying contraption!" He took a breath, catching himself. "I'm sorry, Maestro. Don't take offense, but you know what I think of your machines."

"Lorenzo is going to demonstrate my Great Bird *now*?"

Francesco shrugged. "After his brother won the Palio, *Il Magnifico* announced to the crowds that an angel would fly above them and drop Hell's own fire from the sky. And my apprentice tells me that *inquisitore* are all over the streets and are keeping everyone away from the gardens near *Santi Apostoli*."

That would certainly send a message to the Pope; the church of *Santi Apostoli* was under the protection of the powerful Pazzi family, who were allies of Pope Sixtus and enemies of the Medici.

"When is this supposed to happen?" Leonardo asked the foreman as he hurriedly put on a new shirt; a doublet; and *calze* hose, which were little more than pieces of leather to protect his feet.

Francesco shrugged. "I came to tell you as soon as I heard."

"And did you hear who is to fly my machine?"

"I've told you all I know, Maestro." Then after a pause, he said, "But I fear for Niccolo. I fear that he has told *Il Magnifico* that he knows how to fly your invention."

Leonardo prayed that he could find Niccolo before he came to harm. He too feared that the boy had betrayed him, had insinuated himself into Lorenzo's confidence, and was at this moment soaring over Florence in the Great Bird. Soaring over the Duomo, the Baptistery, and the Piazza della Signoria, which rose from the streets like minarets around a heavenly dome.

But the air currents over Florence were too dangerous. He would fall like Tista, for what was the city but a mass of jagged peaks and precipitous cliffs?

"Thank you, Francesco," Leonardo said, and, losing no time, he made

his way through the crowds toward the church of *Santi Apostoli*. A myriad of smells delicious and noxious permeated the air: roasting meats, honeysuckle, the odor of candle wax heavy as if with childhood memories, offal and piss, cattle and horses, the tang of wine and cider, and everywhere sweat and the sour ripe scent of perfumes applied to unclean bodies. The shouting and laughter and stepping-rushing-soughing of the crowds were deafening, as if a human tidal wave was making itself felt across the city. The whores were out in full regalia, having left their district, which lay between Santa Giovanni and Santa Maria Maggiore; they worked their way through the crowds, as did the cutpurses and pickpockets, the children of Firenze's streets. Beggars grasped onto visiting country villeins and minor guildsmen for a denari and saluted when the red *carroccios* with their long scarlet banners and red, dressed horses passed. Merchants and bankers and wealthy guildsmen rode on great horses or were comfortable in their carriages, while their servants walked ahead to clear the way for them with threats and brutal prodgings.

The frantic, noisy streets mirrored Leonardo's frenetic inner state, for he feared for Niccolo; and he walked quickly, his hand openly resting on the hilt of his razor-sharp dagger to deter thieves and those who would slice open the belly of a passer-by for amusement.

He kept looking for likely places from which his Great Bird might be launched: the dome of the Duomo, high brick towers, the roof of the Baptistery . . . and he looked up at the darkening sky, looking for his Great Bird as he pushed his way through the crowds to the gardens near the Santi Apostoli, which was near the Ponte Vecchio. In these last few moments, Leonardo became hopeful. Perhaps there was a chance to stop Niccolo . . . if, indeed, it was Niccolo who was to fly the Great Bird for Lorenzo.

Blocking entry to the gardens were both Medici and Pazzi supporters, two armies, dangerous and armed, facing each other. Lances and swords flashed in the dusty twilight. Leonardo could see the patriarch of the Pazzi family, the shrewd and haughty Jacopo de' Pazzi, an old, full-bodied man sitting erect on a huge, richly carapaced charger. His sons Giovanni, Francesco, and Guglielmo were beside him, surrounded by their troops, who were dressed in the Pazzi colors of blue and gold. And there, to Leonardo's surprise and frustration, was his great Eminence the Archbishop, protected by the scions of the Pazzi family and their liveried guards. So this was why Lorenzo had made his proclamation that he would conjure an angel of death and fire to demonstrate the power of the Medici . . . and Florence. It was as if the Pope himself were here to watch.

Beside the Archbishop, in dangerous proximity to the Pazzi, Lorenzo and Giuliano sat atop their horses. Giuliano, the winner of the Palio, the ever-handsome hero, was wrapped entirely in silver, his silk stomacher embroidered with pearls and silver, a giant ruby in his cap; while his brother Lorenzo, perhaps not handsome but certainly an overwhelming

presence, wore light armor over simple clothes. But Lorenzo carried his shield, which contained "Il Libro," the huge Medici diamond reputed to be worth 2,500 ducats.

Leonardo could see Sandro behind Giuliano, and he shouted his name; but Leonardo's voice was lost in the din of twenty thousand other voices. He looked for Niccolo, but he could not see him with Sandro or the Medici. He pushed his way forward, but he had to pass through an army of the feared Medici-supported Companions of the Night, the darkly dressed Dominican friars who held the informal but hated title of *inquisitore*. And they were backed up by Medici sympathizers sumptuously outfitted by Lorenzo in armor and livery of red velvet and gold.

Finally, one of the guards recognized him, and he escorted Leonardo through the sweaty, nervous troops toward Lorenzo and his entourage by the edge of the garden.

But Leonardo was not to reach them.

The air seemed heavy and fouled, as if the crowd's perspiration was rising like heat, distorting shape and perspective. Then the crowds became quiet, as Lorenzo addressed them and pointed to the sky.

Everyone looked heavenward.

And like some gauzy fantastical winged creature that Dante might have contemplated for his *Paradiso*, the Great Bird soared over Florence, circling high above the church and gardens, riding the updrafts and the currents that swirled invisibly above the towers and domes and spires of the city. Leonardo caught his breath, for the pilot certainly looked like Niccolo; surely a boy rather than a full-bodied man. He looked like an awkward angel, with translucent gauze wings held in place with struts of wood and cords of twine. Indeed, the glider was as white as heaven, and Niccolo—if it was Niccolo—was dressed in a sheer white robe.

The boy sailed over the Pazzi troops like a bird swooping above a chimney, and seasoned soldiers fell to the ground in fright, or awe, and prayed; only Jacopo de' Pazzi, his sons, and the Archbishop remained steady on their horses. As did, of course, Lorenzo and his retinue.

And Leonardo could hear a kind of buzzing, as if he were in the midst of an army of cicadas, as twenty thousand citizens prayed to the soaring angel for their lives as they clutched and clicked black rosaries.

The heavens had opened to give them a sign, just as they had for the Hebrews at Sinai.

The boy made a tight circle around the gardens and dropped a single fragile shell that exploded on impact, throwing off great streams of fire and shards of shrapnel that cut down and burned trees and grass and shrubs. Then he dropped another, which was off mark, and dangerously close to Lorenzo's entourage. A group of people were cut down by the shrapnel, and lay choking and bleeding in the streets. Fire danced across the piazza. Horses stampeded. Soldiers and citizens alike ran in panic. The Medici and Pazzi distanced themselves from the garden, their frightened troops closing around them like Roman phalanxes. Leonardo would certainly not be able to get close to the First Citizen now. He shouted at

Niccolo in anger and frustration, for surely these people would die; and *Leonardo* would be their murderer. He had just killed them with his dreams and drawings. Here was truth! Here was revelation! *He* had murdered these unfortunate strangers, as surely as he had killed Tista. It was as if his invention now had a life of its own, independent of its creator.

As the terrified mob raged around him, Leonardo found refuge in an alcove between two buildings and watched his Great Bird soar in great circles over the city. The sun was setting, and the high, thin cirrus clouds were stained deep red and purple. Leonardo prayed that Niccolo would have sense enough to fly westward, away from the city, where he could hope to land safely on open ground; but the boy was showing off and underestimated the capriciousness of the winds. He suddenly fell, as if dropped, toward the brick and stone below him. He shifted weight and swung his hips, trying desperately to recover. An updraft picked him up like a dust devil, and he soared skyward on heavenly breaths of warm air.

God's grace.

He seemed to be more cautious now, for he flew toward safer ground to the west . . . but then he suddenly descended, falling, dropping behind the backshadowed buildings; and Leonardo could well imagine that the warm updraft that had lifted Niccolo had popped like a water bubble.

So did the boy fall through cool air, probably to his death.

Leonardo waited a beat, watching and waiting for the Great Bird to reappear. His heart was itself like a bird beating violently in his throat. Niccolo. . . . Prayers of supplication formed in his mind, as if of their own volition, as if Leonardo's thoughts were not his own, but belonged to some peasant from Vinci grasping at a rosary for truth and hope and redemption.

Those crowded around Leonardo could not guess that the angel had fallen . . . just that he had descended from the Emyrean heights to the man-made spires of Florence where the sun was blazing rainbows as it set; and Lorenzo emerged triumphantly. He stood alone on a porch so that he could be seen by all and distracted the crowds with a haranguing speech that was certainly directed to the Archbishop.

Florence is invincible.

The greatest and most perfect city in the world.

Florence would conquer *all* its enemies.

As Lorenzo spoke, Leonardo saw, as if in a lucid dream, dark skies filled with his flying machines. He saw his hempen bombs falling through the air, setting the world below on fire. Indeed, with these machines Lorenzo could conquer the Papal States and Rome itself; could burn the Pope out of the Vatican and become more powerful than any of the Caesars.

An instant later Leonardo was running, navigating the maze of alleys and streets to reach Niccolo. Niccolo was all that mattered. If the boy was dead, certainly Lorenzo would not care. But Sandro . . . surely Sandro . . .

There was no time to worry about Sandro's loyalties.

The crowds thinned, and only once was Leonardo waylaid by street arabs, who blocked his way. But when they saw that Leonardo was armed and wild and ready to draw blood, they let him pass; and he ran, blade in hand, as if he were being chased by wild beasts.

Empty streets, empty buildings, the distant thunder of the crowds constant as the roaring of the sea. All of Florence was behind Leonardo, who searched for Niccolo in what might have been ancient ruins but for the myriad telltale signs that life still flowed all about here, and soon would again. Alleyways became shadows, and there was a blue tinge to the air. Soon it would be dark. A few windows already glowed tallow yellow in the balconied apartments above him.

He would not easily find Niccolo here. The boy could have fallen anywhere; and in grief and desperation, Leonardo shouted his name. His voice echoed against the high building walls; someone answered in falsetto *voce*, followed by laughter. But then Leonardo heard horses galloping through the streets, heard men's voices calling to each other. Lorenzo's men? Pazzi? There was a shout, and Leonardo knew they had found what they were looking for. Frantic, he hurried toward the soldiers, but what would he do when he found Niccolo wrapped in the wreckage of the Great Bird? Tell a dying boy that he, Leonardo, couldn't fly his own invention because he was afraid?

I was trying to make it safe, Niccolo.

He found Lorenzo's Companions of the Night in a piazza surrounded by tenements. They carried torches, and at least twenty of the well-armed priests were on horseback. Their horses were fitted out in black, as if both horses and riders had come directly from Hell; one of the horses pulled a cart covered with canvas.

Leonardo could see torn fustian and taffeta and part of the Great Bird's rudder section hanging over the red-and-blue striped awning of a balcony. And there, on the ground below, was the upper wing assembly, intact. Other bits of cloth slid along the ground like foolscap.

Several *inquisitore* huddled over an unconscious figure.

Niccolo.

Beside himself with grief, Leonardo rushed headlong into the piazza; but before he could get halfway across the court, he was intercepted by a dozen Dominican soldiers. "I am Leonardo da Vinci," he shouted, but that seemed to mean nothing to them. These young Wolves of the Church were ready to hack him to pieces for the sheer pleasure of feeling the heft of their swords.

"Do not harm him!" shouted a familiar voice.

Sandro Botticelli.

He was dressed now in the thick, black garb of the *inquisitore*. "What are you doing here, Leonardo? You're a bit late." Anger and sarcasm was evident in his voice.

But Leonardo was concerned only with Niccolo, for two brawny *inquisitore* were lifting him into the cart. He pushed past Sandro and mindless

of consequences pulled one of the soldiers out of the way to see the boy. Leonardo winced as he looked at the boy's smashed skull and bruised body—arms and legs broken, extended at wrong angles—and then turned away in relief.

This was not Niccolo; he had never seen this boy before.

"Niccolo is with Lorenzo," Sandro said, standing beside Leonardo. "Lorenzo considered allowing Niccolo to fly your machine, for the boy knows almost as much about it as you."

"Has he flown the Great Bird?"

After a pause, Sandro said, "Yes . . . but against Lorenzo's wishes. That's probably what saved his life." Sandro gazed at the boy in the cart, who was now covered with the torn wings of the Great Bird, which, in turn, was covered with canvas. "When Lorenzo discovered what Niccolo had done, he would not allow him near any of your flying machines, except to help train *this* boy, Giorgio, who was in his service. A nice boy, may God take his soul."

"Then Niccolo is safe?" Leonardo asked.

"Yes, the holy fathers are watching over him."

"You mean these cutthroats?"

"Watch how you speak, Leonardo. Lorenzo kept Niccolo safe for you, out of love for you. And how have you repaid him . . . by being a traitor?"

"Don't ever say that to me, even in jest."

"I'm not jesting, Leonardo. You've failed Lorenzo . . . and your country, failed them out of fear. Even a child such as Niccolo could see that."

"Is that what you think?"

Sandro didn't reply.

"Is that what Niccolo told you?"

"Yes."

Leonardo would not argue, for the stab of truth unnerved him, even now. "And you, why are you here?"

"Because Lorenzo trusts me. As far as Florence and the Archbishop are concerned, the angel flew and caused fire to rain from Heaven. And is in Heaven now as we speak." He shrugged and nodded to the *inquisitore*, who mounted their horses.

"So now you command the Companions of the Night instead of the divine power of the painter," Leonardo said, the bitterness evident in his voice. "Perhaps we are on different sides now, Little Bottle."

"*I'm on the side of Florence*," Sandro said. "And against her enemies. You care only for your inventions!"

"And my friends," Leonardo said quietly, pointedly.

"Perhaps for Niccolo, perhaps a little for me; but more for yourself."

"How many of my flying machines does Lorenzo have now?" Leonardo asked, but Sandro turned away from him and rode behind the cart that carried the corpse of the angel and the broken bits of the Great Bird. Once again, Leonardo felt the numbing, rubbery sensation of great fatigue, as if he had turned into an old man, as if all his work, now finished, had come to nothing. He wished only to be rid of it all: his inventions,

his pain, his guilt. He could not bear even to be in Florence, the place he loved above all others.

There was no place for him now.

Leonardo could be seen as a shadow moving inside his canvas-covered makeshift workshop, which was brightly lit by several water lamps and a small fire. Other shadows passed across the vellum-covered windows of the surrounding buildings like mirages in the Florentine night. Much of the city was dark, for few could afford tallow and oil.

But Leonardo's tented workshop was bright, for he was methodically burning his notes and papers, his diagrams and sketches of his new soaring machine. After the notebooks were curling ash and smoke rising through a single vent in the canvas, he burned his box-shaped models of wood and cloth; kites and flying machines of various design; and then, at the last, he smashed his partially completed soaring machine . . . smashed the spars and rudder, smashed the box-like wings, tore away the webbing and fustian, which burned like hemp in the crackling fire.

As if Leonardo could burn his ideas from his thoughts.

Yet he could not help but feel that the rising smoke was the very stuff of his ideas and invention. And that he was spreading them for all to inhale, like poisonous phantasms.

Lorenzo already *had* Leonardo's flying machines.

More children would die. . . .

He burned his drawings and paintings, his portraits and madonnas and varnished visions of fear, then left the makeshift studio like a sleep-walker heading back to his bed; and the glue and fustian and broken spars ignited, glowing like coals, then burst, exploded, shot like fireworks or silent hempen bombs until the canvas was ablaze. Leonardo was far away by then and couldn't hear the shouts of Andrea and Francesco and the apprentices as they rushed to put out the fire.

Niccolo found Leonardo standing upon the same mountain where Tista had fallen to his death. His face and shirt streaked with soot and ash, Leonardo stared down into the misty valley below. There was the Palazzo Vecchio, and the dome of the Duomo reflecting the early morning sun . . . and beyond, created out of the white dressing of the mist itself, was his memory cathedral. Leonardo gazed at it . . . into it. He relived once again Tista's flight into death and saw the paintings he had burned; indeed, he looked into Hell, into the future where he glimpsed the dark skies filled with Lorenzo's soaring machines, raining death from the skies, the winged devices that Leonardo would no longer claim as his own. He wished he had never dreamed of the Great Bird. But now it was too late for anything but regret.

What was done could not be undone.

"Maestro!" Niccolo shouted, pulling Leonardo away from the cliff edge,

as if he, Leonardo, had been about to launch himself without wings or harness into the fog. As perhaps he had been.

"Everyone has been frantic with worry for you," Niccolo said, as if he was out of breath.

"I should not think I would have been missed."

Niccolo snorted, which reminded Leonardo that he was still a child, no matter how grown up he behaved and had come to look. "You nearly set Maestro Verrocchio's bottega on fire."

"Surely my lamps would extinguish themselves when out of oil, and the fire was properly vented. I myself—"

"Neighbors saved the bottega," Niccolo said, as if impatient to get on to other subjects. "They alerted *everyone*."

"Then there was no damage?" Leonardo asked.

"Just black marks on the walls."

"Good," Leonardo said, and he walked away from Niccolo, who followed after him. Ahead was a thick bank of mist the color of ash, a wall that might have been a sheer drop, but behind which in reality were fields and trees.

"I knew I would find you here," Niccolo said.

"And how did you know that, Nicco?"

The boy shrugged.

"You must go back to the bottega," Leonardo said.

"I'll go back with you, Maestro."

"I'm not going back." The morning mist was all around them; it seemed to be boiling up from the very ground. There would be rain today, and heavy skies.

"Where are you going?"

Leonardo shrugged.

"But you've left everything behind!" After a beat, Niccolo said, "I'm going with you."

"No, young ser."

"But what will I do?"

Leonardo smiled. "I would guess that you'll stay with Maestro Verrocchio until Lorenzo invites you to be his guest. But you must promise me you'll never fly any of his machines."

Niccolo promised; of course, Leonardo knew that the boy would do as he wished. "I did not believe you were afraid, Maestro."

"Of course not, Nicco."

"I shall walk with you a little way."

"No."

Leonardo left Niccolo behind, as if he could leave the past for a new, innocent future. As if he had never invented bombs and machines that could fly. As if, but for his paintings, he had never existed at all.

Niccolo called to him . . . then his voice faded away, and was gone.

Soon the rain stopped and the fog lifted, and Leonardo looked up at the red-tinged sky.

Perhaps in hope.

Perhaps in fear. ●

OLAF STAPLEDON: SPEAKING FOR THE FUTURE

by Robert Crossley. Foreword by Brian W. Aldiss.

Syracuse University Press, \$39.95 (hardcover)

You're more likely to have heard of Olaf Stapledon than to have read him and not all that likely, sad to say, to have heard of him. You can hardly be blamed, in these times when SF's present seems so busy that few feel a need to turn to its past. Yet viewed from a larger perspective, he looms as a literary giant in our field, invisible to many perhaps, but palpably present. No one before or since has quite matched his ability to deal with reality on the largest scale, spanning vast reaches of space and astounding eons of time. While others do well to merely hint at or evoke the awesome wonders of our universe, Stapledon holds them out to us on the palm of his hand for our inspection. His greatest works won't be the easiest reading you've ever done, but settle into his orbit and you will come away with vast new spaces in your mind, spaces full of stars and strange races, that weren't there before. You will understand the reaction of Arthur C. Clarke, who was to write, "Though more than sixty years have passed, I can still visualize the very shelf

in the Minehead Public Library where I discovered *Last and First Men*. No other book had a greater influence on my life."

Robert Crossley was given unrestricted access to all of Stapledon's papers and eventually made his literary executor. To their credit, the family seem to have sought no influence in return. We are given, as far as I can tell, an objective picture, from Stapledon's many acts of generosity to the delicate matter of his desire for extra-marital experimentation late in life.

The influences on that life are clearly established in the excellent biography that results. From his early childhood in exotic Port Said, to his highly principled, intellectual parents (his mother named him Olaf because she'd been reading Carlyle's *The Early Kings of Norway*) and his schooldays at an atypical boarding school and later Oxford, to his protracted courtship of his Australian cousin Agnes, his pacifism and service as an ambulance driver in France (a third-generation agnostic consorting with fundamentalists!) during World War One and the bumpy road to a career in philosophy and adult education, and a life lived mainly near Liverpool, the trail is complete.

Stapledon was a late bloomer, which bothered him. But when *Last and First Men* (1930) burst forth unheralded when he was forty-four, it quickly was acclaimed on both sides of the Atlantic. Three other essential works every SF reader should know followed: *Odd John* (1935), the quintessential story of a superman; *Star Maker* (1937), his masterpiece—it takes up where *Last and First Men* left off in a mind-stretching exploration of the history of the universe; and *Sirius* (1944), the moving story of a dog with human intelligence, and one of the most convincing portraits of an “alien” mind.

Any one of these would be a remarkable achievement from an SF writer; that all four came from an author who wrote outside our tradition and essentially reinvented it for himself is astonishing. With a strong grasp of the details of Stapledon’s life, Crossley is able to show us how he did it. For me, the answer is capsulized in the fact, as Crossley notes, that Stapledon, throughout his life, drew inspiration from the awe and wonder he found in the starry sky.

It’s noteworthy, I think, that Stapledon was not snobbish, as some other independent science-fictionists have been. Although he had misgivings about the kind of fiction promoted by the garish pulp magazine covers he saw, he came, later in life, to refer to his novels as science fiction. This appreciation for the literary tradition to which he’d linked himself was returned in kind by the SF fans who discovered his work in the thirties and remembered it even as it was

forgotten elsewhere.

This connection is epitomized in the following bittersweet anecdote. In 1949, Stapledon visited the U.S. for the only time in his life and found himself a victim of politics and the anti-Communist hysteria of the time. Only New York’s Hydra Club recognized him as a literary hero. So it was he visited Fletcher Pratt’s apartment, where the meetings were held, and spent an evening with, among others, John W. Campbell, Donald A. Wollheim, Harry Harrison, and Theodore Sturgeon. It would behoove us to honor this man as they did, and remember his work and his exemplary life. Seek out his work, and this fine biography, which is unlikely to be superseded for the foreseeable future.

OF TANGIBLE GHOSTS,

by L. E. Modesitt, Jr.

Tor, \$22.95 (hardcover)

Here we have an intriguing alternate world where the Dutch did not lose their North American foothold to the English and the U.S. as we know it never came into existence. The alternative nation, Columbia, is nevertheless a superpower in the late twentieth century, contending with New France (the original was conquered), Spain, Chung Kuo, and the Austro-Hungarians, who have been expanding their empire in Europe. Not a bad place to live by this world’s standards, though the President (named Armstrong, could it be . . . ?) is a mostly ceremonial figure and the Speaker is the real chief executive and has a feared secret police—the Sedition Prevention and Security Service,

or Spazi—at his command. Many of the cars on the road are steamers, dirigibles and jets are competing for airspace and computers are called Babbages. The most important difference, however, is that ghosts are indisputably real. When people die violently or unexpectedly a ghost is formed. This doesn't make the book a fantasy, however. The ghosts are treated as a physical, not supernatural, phenomenon.

Unfortunately, against this intriguing background, the plot is essentially a standard spy/detective suspense story. Professor Johan Eshbach is a retired Spazi agent who has been called back to active duty after a murder on his campus. His investigations lead him back into the world of international and inter-agency intrigue, as the murder proves to be connected to secret research into the nature, and therefore the control, of ghosts. Johan prefers the side of the President to that of his own agency's patron, the Speaker, but finds that he must put his own survival first, as both sides find reason to consider him and his work an embarrassment. All this is interesting in a low-key way that never generates much excitement, although it was easy to stick with it until the end.

Plot aside, I have two complaints about this book, or books like it. Why go to the trouble of inventing an interesting alternate history, or alien world, if you're only going to use it as the setting for what is essentially a non-genre plot? Although Johan does make use of some of the ghost technology he discovers, there's nothing in his ex-

periences that you couldn't convey in a mainstream story.

Secondly, why combine two unrelated fantastic premises such as an alternate history and ghosts? In fairness to Modesitt, if you look hard enough, there are what may be hints that it's the very phenomenon of ghosting (and what that means to warfare and therefore imperialism) that has resulted in the creation of this alternate history. If we were given enough history to really draw this conclusion, I'd be more satisfied. (Even then I'd be tempted to ask why non-supernatural ghosts occur here and not in our world.) As it is, these fantastic elements feel stuck together arbitrarily, and, like food insufficiently chewed, are swallowed with difficulty. That's a metaphor I choose pointedly, for one final observation about this book is its obsession with food, always so lovingly described as to make me hungry. This was so marked that I kept waiting for it to play a role in the plot. It never did.

CALIBAN'S HOUR

by Tad Williams

HarperPrism, \$14.99 (hardcover)

After successfully offering us some rather long books, Tad Williams now proffers a short one, by rough count just barely a novel by Hugo standards. In ambition, however, it is anything but small, since it aims to be a sequel to Shakespeare's *The Tempest*. To tell us at last the other side of the story.

Twenty years have passed and Caliban has finally escaped his lonely isle. With great difficulty he makes his way in a world he could never have imagined, until finally

he can climb and creep his way into Ferdinand's palace in Naples, into Miranda's bedroom. There at last it is Caliban's hour. He can force her to listen, unburden himself of the ordeal that has been his life, and then have his revenge. Miranda sits in her bed, knowing she is to die when his story is done, feeling again, perhaps, the affection they shared as children, her frustration at being unable to prevent Caliban's exploitation and persecution by Prospero, her impatience with Caliban as they matured, and so on. She also learns of Caliban's life before the exiles' arrival, of his connection to the secret of the island's magic (casting Ariel in a new light) and of the love that drove him until it was overwhelmed by despair and anger. Caliban is a gripping narrator and he makes his case quite well; if you've met him before, you'll want to hear him out. Believing him, it's easy to take his side rather than Prospero's, as we had previously. When he's done, the ending, at least, is quite satisfying, with an odd echo of *Peter Pan*.

Your response to all this will depend on your reaction to this version of Caliban. I thought he was fine on his own terms, if less successful at evoking sympathy than he ideally should be. Other than that, he'd be hard to fault if this were a new story unrelated to any other, but I couldn't quite identify him with the character I know from Shakespeare, or Miranda either. Perhaps it's the language that—wisely—makes no attempt to echo the Bard's richness, or perhaps it's just the happenstance that Williams's picture of these

people and mine only partly overlap. Williams knew that he'd have the—insurmountable—problem of his readers' preconceived notions when he started to create this work and it's to his credit that he went ahead anyway. So this is one case where I can't unilaterally declare that my subjective reaction must be the correct one. If you find what I've described interesting, you owe it to yourself, Tad Williams, and Caliban, to give this slim volume a try.

THEY FLY AT CIRON

by Samuel R. Delany

Tor, \$19.95 (hardcover)

An earlier version of this novel appeared as a much shorter collaboration with James Sallis in the June 1971 *F&SF*. In its new form, with Sallis's contribution replaced and at about four times the length, Delany says of it, "In one sense this is my second novel—only it has taken me thirty years to write." Indeed, it has much of the freshness of an early work and yet is full of the concerns and insights of the mature artist.

Ciron is a utopian village, not by sociopolitical design, but by heritage. Their perfect and peaceful way of life seems as natural, ordinary, and inevitable to them as ours does to us. So they are stunned by the brutal invasion of the Myetrans, whose only logic is power, of which, with their superior technology, they seem to have plenty. The contrast between the two people might be summed up in their first large scale encounter. After blasting their demands for surrender into the village with their loudspeakers, the Myetrans

burst into the square in the middle of the night to declare their rule. They mistake quiet Kern, the quarryman, for the town's leader because he steps forward to greet them (the town has no single leader) and so blast him down where he stands in their standard shock intimidation gambit. The Çironians can't comprehend this, any more than they can the meaning of "surrender," a word they've never heard, or had use for, before. So they stand there dumbfounded and the Myetran leader barks, "They refuse to surrender! Attack!" And the massacre begins.

Happily for the surviving Çironians, there are those among them with some idea of how to harry and distract and spy on the Myetrans until a new ally, neighbors long held at arms length, the Winged Ones of Hi-Vator, and a bit of fairy-tale luck, come to their assistance.

There's much to take pleasure in here, from the simple story itself and the characters limned so neatly and economically, to the subliminal running commentary Delany offers us on the nature of societies, of conflict and of humanity in all its forms. Despite the work's origins in his novice days, these elements clearly link it to the more ambitious works of today's master (especially the Neveryon series). As a bonus, filling out the volume are two short stories set in the same milieu. This is well worth your time and may leave you wanting more.

SHERLOCK HOLMES IN ORBIT

Edited by Mike Resnick and Martin H. Greenberg
DAW, \$5.50 (paperback)

Some years ago I donned a smoking jacket and held a pipe so that artist Tom Kidd could use photos of me as a guide in painting the body (the face came from elsewhere) of Sherlock Holmes for the cover of *Sherlock Holmes Through Time and Space*, a reprint anthology edited by Martin H. Greenberg. Now Greenberg has collaborated with Mike Resnick in editing an anthology of 26 original stories on the same theme. Anthologies such as this are usually very uneven in quality, but this one, perhaps because of the enduring, almost indestructible appeal of its subject, is rarely less than entertaining from start to finish. Two or three of the stories can be described as slight or silly, but there are more that are notably clever and satisfying by any standard.

The book is divided into four sections. The first and largest, with over half the contributions, is for stories set in the past, i.e., Holmes's native era. We then get stories set in the present, in the future, and the smallest section, with two stories involving life after death.

Although I can't give every author his or her due, I wouldn't be doing my job if I didn't tantalize you with some of my favorites.

George Alec Effinger's "The Musgrave Version" barely qualifies as fantastic, but as a sort of metafiction it teases us with the possibility of Holmes knowing Fu Manchu, sailing on the *Nautilus* and visiting Dr. Moreau's island. Effinger should consider expanding this to novel length.

In "The Adventure of the Field Theorem" Vonda N. McIntyre pulls

off the neat trick of giving Holmes Conan Doyle as a client, and that's the only respect in which the story is fantastic, but it's still a good story about how the great detective copes with another man's great obsession.

"Two Roads, No Choices" by Dean Wesley Smith brings Holmes to the deck of the Titanic on that fateful night to help two time travelers discover why history hasn't gone as they think it should. As a consequence, he must make an awesome choice.

How long has David Gerrold waited for a story he could title "The Fan Who Molded Himself," I wonder? Wordplay aside, this story cleverly accounts for what we supposed to be Holmes's powers of observation and deduction. After all, no one could actually be so keen in perception, so quick in deduction. After eliminating that impossibility, we are left with the improbable truth Gerrold gives us.

Finally, I commend to you Robert J. Sawyer's "You See But You Do Not Observe." It deals with some of the same questions as the Smith story, but from a quantum mechanical direction. The events at Reichenbach Falls were even more significant than we knew.

There's much more to amuse you here: stories involving Alice, Babbage's engine, the prototype of Wells's time traveler, aliens, a séance, even a case solved in heaven. Recommended to all for light entertainment and especially, of course, to Sherlock Holmes fans, who can be reassured that this anthology was authorized by Dame Jean Conan Doyle.

QUARANTINE

by Greg Egan

HarperPrism, \$4.50 (paperback)

Egan is Australian and this knockout first novel was first published in Great Britain in 1992. A friend of mine who'd been impressed by his short fiction picked up a copy there and subsequently brought it to my attention. He was right to do so, because *Quarantine* is the kind of book I love to discover: modern hard SF, built rigorously on a scientific concept, developed with real characters, and all the more fantastic and satisfying because its wild ideas are at some level based in truth, in this case the inherently mind-bending truth of quantum mechanics.

The title refers to The Bubble. On November 15th, 2034, the stars disappeared. A featureless spherical shell twelve billion kilometers in radius (i.e., about twice as wide as the orbit of Pluto), an event horizon, was projected around the solar system by aliens or forces unknown. Nothing can get through it in either direction. Thirty-three years later, it's just as much a mystery as ever and just as much a factor in events on Earth, where religious fanatics seized on its "obvious" symbolism.

Nick, a former police officer, lost his wife to such fanatics, and now works as a private investigator. He is asked to investigate the disappearance of Laura Andrews, a brain-damaged woman living in a permanent care facility. She's not worth kidnapping, she's incapable of getting out on her own, yet she's gone. Even with the all the brain "mods" (neural augmentation and programming) he's had, Nick's

progress is slow. But the patient gathering and connecting of facts, in a manner Holmes himself might approve, puts him on the right track and on his way to Hong Kong. It proves also to be the right track for disaster, as Nick encounters his opponents for the first time and loses his freedom in the most profound sense. Ironically it is only after his loss that he gains an inkling of Laura Andrews's importance. [Sorry if this all seems coyly allusive. I'm trying hard not to spoil the story for you and the core idea is so neat it's very tempting to mention it.] Yes, the title is a clue, but I doubt you'll guess *why* the aliens thought it was necessary.

My only problem with the book is the ambiguous ending. Quantum mechanics is important in the story and perhaps it would provide a convincing justification for the concluding state of affairs. A clearer outcome would have been more emotionally satisfying. Perhaps Egan saw this as a matter of artistic

integrity, or perhaps the wave function just hasn't collapsed yet.

Egan deserves great credit on a number of points. First, of course, for the wonderful central idea I've just barely hinted at. You'll have to trust me on this one until you can read the book. Second, for the integrity with which he develops it. Third, for the way he uses his central character, never letting him know more than he should, allowing him to maintain his illusions, even when doing so may temporarily mislead some readers. Fourth, for proving that fresh, imaginative, adult hard SF can and is being written. Here's the book to hand to your friends when they claim otherwise. ●

Correction

Our evocative March cover should have been attributed to illustrator Mark Harrison, and not to his compatriot, Jim Burns.

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Easter is a big con(vention) weekend in the Commonwealth countries. Plan now for social weekends with your favorite SF authors, editors, artists, and fellow fans. For a longer, later list, an explanation of cons, a sample of SF folksongs, and info on clubs and fanzines, send me an SASE (self-addressed, stamped #10 [business] envelope) at 101 S. Whiting #700A, Alexandria VA 22304. The hot line is (703) 461-8645. If a machine answers (with a list of the week's cons), leave a message and I'll call back on my nickel. When writing cons, send an SASE. For free listings, tell me of your con 6 months out. Look for me as Filthy Pierre at cons—Erwin S. Strauss.

MARCH 1995

31-Apr. 2—**ICon**. For info, write: **Box 550, Stony Brook NY 11790**. Or phone: **(516) 632-6045** (10 AM to 10 PM, not collect). Con will be held in: **Stony Brook NY** (if city omitted, same as in address) on the SUNY campus. Guests will include: **Frederik Pohl, Nancy Kress, Julius Schwartz, Koichi Ohata**.

31-Apr. 2—**FILKONtario**. (905) 574-6212. Toronto ON. SF folksinging. **D. Clement, S. Macdonald**.

31-Apr. 2—**ConCept**. Holiday Inn Metro Centre, Montreal PQ. **S. & J. Robinson, DiFate, Hartwell**.

31-Apr. 2—**S. T. Con**. (403) 263-7806. Calgary AB. Star Trek. **M. Lenard, C. Bridges, N. Taylor**.

31-Apr. 2—**GeoCon**. (206) 866-6000. Evergreen State College, Olympia WA. **Tom Maddox**. Gaming.

APRIL 1995

6-9—**NorwesCon**. (206) 248-2010. Airport Red Lion, Seattle WA. **Robert Silverberg, James Gurney**.

7-9—**Corflu**. (702) 648-5677. Union Plaza Hotel, Las Vegas NV. Annual gathering of fanzine fans.

7-9—**StarFest**. (800) 733-8735 or (303) 671-8735. Denver CO. For fans of Star Trek in all forms.

13-17—**SwanCon**, Box 318, Nedlands WA 6009, Australia. Sheraton Perth. **P. Cadigan**.

14-16—**MiniCon**, Box 8297, Lake St. Stn., Minneapolis MN 55408. (612) 333-7533. **Bloomington MN**.

14-16—**BaltiCon**, Box 686, Baltimore MD 21203. (410) 563-2737. A traditional Easter convention.

14-16—**NeoCon**, Box 48431, Wichita KS 67201. (316) 263-3564. Wichita East Hotel. **C. J. Cherryh**.

14-17—**ConQuest**, Box 26311, Auckland, New Zealand. Mt. Richmond Motor Inn. **V. McIntyre, Zelazny**.

14-17—**UK Nat'l. Con**, 3 York St., Altrincham Cheshire WA15 9QH, UK. Britannia, London Docklands.

15-17—**Force One**, Box 118, Springdale VIC 3171, Australia. Sheraton, Melbourne. A Star Wars con.

21-23—**Nebula Awards Weekend**. (510) 948-5456. New York NY. SF/Fantasy Writers of America annual do.

21-23—**ConTraction**, Box 716, Hazel Park MI 48030. (810) 543-9115. Hilton Inn, Northfield. **Emma Bull**.

21-23—**AmigoCon**, Box 3177, El Paso TX 79923. (800) 585-8574. Airport Quality Inn. **M. Moorcock**.

21-23—**ConTroll**, Box 740969, Houston TX 77274. (713) 895-9202. Ramada Northwest. **Kurtz, Lubov**.

21-23—**Name That Con**, Box 3064, St. Louis MO 63032. (314) 822-4382. Radisson, Clayton MO. **Cook**.

29—**BidCon**, Box 98, Carlisle MA 01741. Park Plaza Hotel, Boston MA. For those into WorldCon bids.

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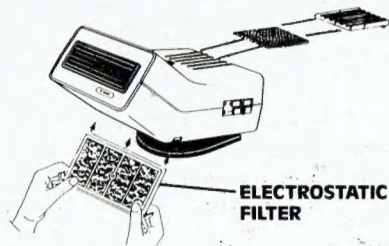
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